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ABSTRACT

This 185-item bibliography with English abstracts of books and articles of recent years on various aspects of Indian education includes a special section on women's education. Emphasis is placed on educational psychology, examination and evaluation (teacher and student), policy and planning, teaching methods, and special education. Less extensive sections deal with: (1) student related issues, (2) the "brain drain", (3) various levels of education in India, (4) vocational and technical schools, and (5) educational management. A list of the periodicals abstracted is included. For related documents see ED 016 168, ED 025 973, and FL 001 502. (RL)

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Contains a Special Section

Women's Education

Abstract Nos. A38 - A77

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ACADEMIC ACHIEVEMENT

156 **DAS B C:** Some observations on the choice status and positive expansiveness in academic achievement. Prajnan 1968, 2(2-3), 88-90. 12 ref.

A sociometric test on choice status and positive expansiveness was administered to 102 male students of a teacher education college, residing in the college hostel. The students were asked to give the names of persons in order of preference from the group under investigation, with whom they would like to work on a specific academic problem. The choice status and positive expansiveness were calculated on the basis of these preferences. The final examination results of the group were taken as indices of their academic achievement. The results show that choice status influences academic achievement, but positive expansiveness does not. No relationship existed between choice status and positive expansiveness. The study thus indicates that the academic achievement of an individual may be improved if attempts are made to increase the choice status by broadening the social contact within the class.

157 **GUPTA V P:** Intelligence, economic status, sex and academic success. Journal of Educational Research and Extension 1968, 5(2), 81-4. 11 ref.

The object of the study was to determine 1) the relationship of intelligence, economic status, and sex with academic achievement; and 2) multiple relationship between intelligence, economic status and academic achievement. A sample of 100 students (50 boys and 50 girls) of the age group 12-16 studying in the 9th class in higher secondary schools in Patiala (Punjab) was subjected to the study. Data regarding age and economic status were obtained from the subjects. Intelligence was measured by administering Bhatia's Battery of Performance Tests of Intelligence. The total marks obtained by students in the previous examination were taken as the index to academic achievement. The results are: 1) subjects higher on economic status and intelligence level were significantly better in academic achievement; 2) academic achievement correlated + 0.29 with intelligence and + 0.34 with economic status (significant at 0.1 level); 3) the correlation between intelligence level and economic status was worked out to determine the multiple relationship between these two factors and academic achievement. It was found to be + 0.21 (significant at 5% level); 4) the multiple correlation was calculated to test the combined effect of the two variables on academic status. It was found to be + 0.41 (significant at 0.29 level); 5) no significant difference was found between two sexes.

158 **MEHTA P**: Motivation development for educational growth. Rajasthan Board Journal of Education 1968, 4(3), 14-19.

Experiments were conducted by the Department of Psychological Foundations of the National Institute of Education to study the effect of achievement motivation on academic success. Teachers trained in achievement motivation were used for the experiment. The results showed that 1) pupils who were taught achievement motivation courses showed a significant rise in their level of motivation; 2) some improvement in study habits, goal-directedness, and sense of responsibility, and a desire to succeed were noticed in the pupils; 3) pupils indicated significant improvement in their performance in physics, chemistry and mathematics at the school examination as well as in the external examination; 4) teachers who took the motivation training course became more conscious of their task as teachers. The outline of a ten-day motivation training programme for teachers has been given.

159 **MEHTA P**: Suggested frame-work of research in socio-educational motivation. Journal of Education and Psychology 1968, 26(3), 169-77. 34 ref.

A review of research on motivation and allied topics reveals the following points: 1) problems of under-achievement, failure, and achievement behaviour in general are very complex; 2) linked with this is the question of motivation which in turn is related to a number of variables; 3) very little evidence exists on the working of such variables in Indian conditions. Research should be conducted on the following variables: 1) cultural variables like socio-economic conditions, child-rearing practices and values of a family, parental attitudes and aspirations, general social climate for learning, and social aspirations; 2) variables relating to school culture and the learning climate generated by it; 3) non-intellectual variables related to academic performance and other aspects of pupil development (pupil variables). The complexity of the problems of motivation and academic performance has been discussed and the inter-relationship between the three groups of variables has been represented in a schematic diagram.

160 **MUTHAYYA B C, RAJESWARI S:** Study of personality and achievement motive of backward and normal children. Journal of Psychological Researches 1968, 12(3), 139-42. 6 ref.

The sample consisted of 30 normal and 23 backward children selected from 496 boys studying in standard IX of a school in Madras city. The criteria used for selection were scholastic achievement and intelligence scores, as measured by Raven's Progressive Matrices - standard form. Eysenck's Personality Inventory (Tamil version) was used for assessing the personality. Slides of Murray's TAT card, 7 B M, and the picture given by Mccleland (Achievement motive N.Y., Appleton-Century-Crafts, 1953. 100) were used for measuring achievement motive. The results indicate that 1) the normal group is more extraverted than the backward group and the mean difference is significant at 0.5 level; 2) the normal group is emotionally more unstable than the backward group, but the mean difference is not significant; 3) the backward group has a lower mean need achievement score than the normals, but the mean difference is not significant, indicating that backward and normal children do not differ in their need achievement. It is quite likely that the need to achieve among the backward is channellized into other directions. It has, therefore, been suggested that the need to achieve must be facilitated by the required type of activity which the individuals may prefer.

161 **PATEL B C:** Investigation into sex-differences in mathematical ability. Vallabh Vidyanagar (Gujarat), Sardar Vallabhbhai Vidyapith, 1966. 103p. 24 ref.

Two mathematical ability tests in Gujarati, one for standard VI and the other for standard X, were constructed and standardized. The tests were administered to a sample of 1600 students (800 from standard VI and 800 from standard X). The results reveal that boys are superior to girls in all the three areas of mathematics (viz., arithmetic, algebra and geometry). The extent of sex-differences is similar in lower age-group, and increases with age. In the lower age-group the difference in the knowledge aspect of mathematical concepts and principles are of small order, but boys are definitely superior in the application aspect of the concept and principles. The results further showed that the standard of mathematical ability of students is very low. The performance of both the groups of standard X in geometry is unsatisfactory, which indicates the lack of analytical thinking in students. The tests constructed by the author have two special features: inclusion in one test of all the concepts and principles learnt during the entire period of schooling, and also three areas of mathematics (arithmetic, algebra and geometry). The standard score norms, percentile norms, and letter grade norms have been presented. The tests would be useful: 1) to evaluate the mathematical ability of students; 2) to select suitable pupils for science and technological courses; 3) to guide students intending to offer mathematics as a subject in secondary examinations; and 4) to classify students according to their mathematical ability. The tests are reproduced in the appendix.

ADMINISTRATION AND ORGANIZATION

162 BAYTI J L: Comparative study of recruitment policies of educational officials in various States. Education 1968, 42(11), 12-18, 23-9.

A review has been made of the recruitment policies and procedures, and service conditions of directors of education, deputy directors of education, district educational officers, headmasters and teachers of secondary and elementary schools in various States of India. A wide variation in the practices is noticed. Adoption of a national policy in respect of recruitment, pay scales, qualifications for various posts, and service conditions has been advocated.

163 PANT B D, AGGARWAL J C: Democratic principal and educational supervisor. New Delhi, Arya Book Depot, 1969, ii, 187p. 106 ref.

A guide for the use of supervisory personnel outlining the nature of their work vis-a-vis the increasing emphasis on the role of education as a means to social and democratic development. The first part (3 chapters) discusses the concept of democratic educational administration, the major areas of responsibility of the principal, and the role of principal as a democratic administrator. The second part dealing with inspectors (20 chapters) covers the following topics: 1) needs, aims, scope and types of supervision; 2) relationship of supervisor with teachers; 3) planning and conducting inspection; 4) existing system of inspection and problems of inspectors; 5) improvement of school inspection; 6) role of the inspector in making teaching more dynamic and improving the school programmes; 7) suggestions for improving supervisory practices; 8) extracts from the recommendations of Secondary Education Commission (1952-53), International Conference on Public Education, Geneva (1956), and Education Commission (1964-66) on school inspection; 9) supervision of elementary schools; and 10) review of school inspection practices in the U.K., U.S.A., and U.S.S.R. The appendix gives a specimen annual inspection form.

164 VERMA P L: Students' participation in school administration. Rajasthan Board Journal of Education 1968, 4(4), 42-7. 8 ref.

The following points emerged from a review of five investigations regarding student participation in school administration: 1) students are capable of sharing the responsibility of school administration; 2) they can give valuable and practical suggestions provided they are given the freedom of expression; 3) they do not lack leadership, initiative, creativeness, tolerance, cooperative attitude, and sense of social service. On the basis of the findings of the studies, the following suggestions have been made: 1) nomenclature like student union, student parliament should be dropped since they have a political stigma; 2) the entire student body should be divided into a number of small societies each responsible for a specific activity. Programmes involving participation of the entire school should be organized by each society by rotation; 3) the election system may not be abolished but limited to societies only; 4) provision should be made for the nomination of deserving students to each society; 5) the two concepts, democracy in politics, and democracy in education, should be distinguished; 7) each school should be free to make experimentation in students' participation in school administration and no rigid rule should be enforced by the department of education; 8) periodical assessment of the students' contribution to administration should be made and changes introduced accordingly.

ADULT EDUCATION

165 DARA SINGH: Challenge of adult education. Haryana Journal of Education 1968, 1(4), 51-5.

The factors retarding the progress of adult education have been discussed and the following remedial measures have been suggested: 1) opening of more adult education centres; 2) selecting teachers and supervisory staff possessing missionary zeal for social service; 3) involving the local educated people in the adult education programme; 4) broadcasting special programmes for adults from the All India Radio; 5) keeping functional literacy as the aim of the whole programme; 6) producing suitable literature on functional literacy for adults; 7) fixation of school timings in consultation with the community; 8) making adult teaching compulsory for student teachers. The scheme can be first introduced in factory areas or in big farms employing a large number of farmers; 9) introducing the programme of adult education in the National Service Corps scheme [see *Indian Educational Material* v.2, no.2, abstract No.196] for students.

166 MULAY S: Need for research in adult education. Indian Journal of Adult Education 1968, 29(11), 7.

Research in adult education should be undertaken for: 1) improving adult education practices and policies; 2) developing more effective methods and satisfactory techniques; 3) production of better learning material; 4) successful solution of outstanding and present problems confronting adult education; 5) devising ways and means to motivate adults in learning; 6) determining the efficiency and suitability of existing teaching methods; and 7) finding out the right kind of professional competency for the effective promotion of the programmes. Results of research should be quickly disseminated. Adult education programmes should be evaluated in their totality and systematic research should be the basis of all such programmes.

BRAIN DRAIN

167 ABRAHAM P.M: Stopping the brain drain - no easy solution. Times of India 10 December 1968, p.10, Cols. 3-5, 7-8. 2220 words.

The role of the scientists' pool [see *Indian Educational Material* v.2, no.3 abstract o. A123] in encouraging Indian scientists abroad to return to India has been discussed. Criticisms of the pool mostly arise from attributing to it responsibilities and powers which it does not possess. The pool is neither intended nor empowered to bring about any transformation in the employment market. Viewed in this context the performance of the pool during the last nine years is very significant. It has been stressed that the policy for ensuring better utilization of manpower from overseas should form part of the general policy of talent utilization. Any special measures for foreign-trained scientists would encourage more Indians to take foreign training. It is expected that in the long run the immigration policies of the host countries would influence the return of the scientists working abroad.

168 BOSE A K: To attract the scientists homeward. Hindu 8 December 1968. p.6, Cols. 4-8. 1460 words; Conditions required to get back Indian scientists. Statesman 31 October 1968, p.8, Cols. 4-6. 1890 words.

The following suggestions have been made for reducing brain drain from India: 1) improvement in the working of the scientists' pool [see *Indian Educational Material* v.2, no.3 abstract no. A123]. Pool members belonging to one discipline should be placed in one institution. Such concentration of specialists would create an atmosphere conducive to excellence in research; 3) making available to scientists the services of sophisticated instruments like NMR spectrometers through a national centre; 4) inclusion of young and active scientists in the policy making-body of professional organizations; 5) evaluating the achievements of scientists every five years and suitably rewarding the deserving scientists; 6) appointing senior faculty members as heads of university departments for two years on a rotation basis; 7) establishment of a symbiotic relationship between universities and national laboratories; 8) appointing scientists who have passed the peak of their research productivity to administrative positions in the bureaucracy; 9) offering visiting professorships to qualified Indian scientists abroad and also inviting them to conduct short courses.

169 SABERWAL S: Some myths and fancies. Statesman 11 November 1968, p.6, Cols. 4-6. 990 words.

The following comments have been made on the current discussion on immigrant Indian scientists triggered by the award of the Nobel prize to Dr H G Khorana: 1) the stay of Indian scientists in foreign countries is not a financial loss to India since the most expensive part of their education is provided by the host countries. India would be benefitted if even 20-25% of foreign-trained scientists come back to India; 2) a change in the administrative personnel in the educational and research fields would not facilitate the return of foreign scientists. Scientists do not return because the training received by them has no relevance to the Indian situation. The training programmes of the host countries for Indian scientists are designed to meet their own requirements; 3) compared to foreign countries, the academic life of India is not intolerable. It has been stressed that priorities in scientific research should be properly defined and pursued rigorously instead of proliferation of laboratories around stray geniuses.

170 **SARIN J N:** Ways and means of arresting the brain drain. Mail 26 October 1968, p.6, Cols. 3-6. 1000 words.

The question of brain drain is mainly of science-mindedness or the consciousness of the value of scientific education and research. It is, therefore, imperative that the country should give a place of priority to science and education to overcome the problem of brain drain. Good facilities and equipment, accompanied by the absence of red tape, would make most Indian scientists stay at home and make their contribution to the reconstruction of India, in spite of the lower economic status. The administration of scientific research should be vested in scientists.

COURSES OF STUDY (Higher Education)

171 **ALL INDIA OCCUPATIONAL THERAPISTS ASSOCIATION:** Seminar on planning educational programmes, January 1968 annual conference. Journal of Rehabilitation in Asia 1968, 9(4), 31-8.

Four papers were presented: 1) current thinking in modifying or upgrading undergraduate training programme, by M R Kulkarni; 2) general survey of the occupational therapy training programme in the New Delhi school, by R Gupta; 3) planning for refresher course by S S Sharma; 4) basic consideration in planning postgraduate programmes in occupational therapy, by M M Shahani. The first article discusses the selection of students, course content, and assessment of students, with particular reference to the undergraduate training programme of the Occupational Therapy School, Nagpur. Selection of students should be based on their academic achievement, their interest and aptitude, and a long interview with them. A probationary period at the beginning of the course has also been suggested. In deciding the course content, the need for a balance between teaching of general principles and specialization has been stressed. The temptation of providing more medical knowledge should be resisted and adequate clinical experience should be provided. In the second article, the view that occupational therapy is inferior to other branches of medical science has been deplored. Provision for higher studies and specialization has been suggested. The third article gives an outline for a refresher course. The fourth article points out that the success of a postgraduate programme depends upon two factors: 1) a sound understanding of basic medical sciences (anatomy, physiology, biomechanics, pathology etc.), and 2) developing in students a favourable attitude towards the profession. It has been stressed that postgraduate studies should be considered as a continuation of the undergraduate programme, and short educational programmes would not achieve the desired objectives.

172 AMIN A A, CHATTERJEE K C: Integration of degree and diploma courses in pharmacy. Indian Journal of Pharmaceutical Education 1968, 2(2), 87-91.

A pre-condition of the integration of the two courses is that all institutions should accept the syllabus framed by the All India Council for Technical Education (AICTE) with suitable modifications, if necessary. The syllabus of the diploma courses framed by the Pharmacy Council of India can be integrated with the degree courses, without interfering with the total content of the AICTE course. The following are the advantages of the integration: 1) considerable savings on buildings, staff and equipment; 2) distribution of seats between diploma and degree courses may be adjusted to suit the changing demands; 3) better students of the diploma course could switch over to degree courses, and mediocre students of the degree course may become pharmacists; 4) the integration may be regarded as the first stage towards the upgrading of diploma courses; 5) integration would also bring about overall integration in the entire pharmaceutical field.

173 BHAR J N: Electronics education in India. Statesman 16 October 1968, p.10, Cols. 3-6. 1900 words.

Traces the development of electronics education since the inclusion of the subject 'wireless' in the postgraduate course in Physics in the Calcutta University in 1925. Different patterns of electronics education were followed in different places and in spite of the recognition of the increasing importance of electronics, it was not given the status of a separate discipline before 1960. The attitude of the authorities concerned, which retarded the growth of electronics education, has been deprecated. The development of the electronics industry in India has now resulted in the rapid expansion of electronics education. Electronics education is now provided by universities, engineering colleges, technological institutions and also by professional institutions like Institute of Electronics and Radio Engineers. Polytechnics provide education for the electronics technicians and craftsmen. It has been stressed that there should be an increased emphasis on physics and mathematics with the reduction of the course content relating to subsidiary aspects like surveying, engineering drawing, and workshops practice.

ECONOMICS OF EDUCATION

174 SCHNECK R E, DUNDAS A: Measuring the costs and benefits of company training programs. Integrated Management 1968, 30, 9-17. 12 ref.

Both the economic and the behavioural science perspectives have been used to point out some practical and conceptual difficulties in evaluating company training programmes. Systematic evaluation of the programmes involves two interrelated processes: 1) analyzing the costs and benefits of the programme according to the criterion of economic efficiency; and 2) determining the validity of the programme which is essentially a behavioural science concerned with measuring the change in skills, attitudes or knowledge. The problems involved in the first process are: 1) separation of training costs and benefits from other cost and benefit factors; 2) indirect costs of training; 3) opportunity costs; 4) economic life of the project; 5) non-quantifiable variables. The problems involved in measuring the validity of the training programme are: 1) selection of criteria; 2) eliminating the effects of training from other factors which might influence the performance; 3) testing methods to determine if any change has occured; 4) evaluation procedures for determining the four outcomes of training: reactions, learning, behaviour and results.

EDUCATION : GENERAL

175 GUPTA H G: Reorientation of education programme - some practical suggestions. Educational India 1968, 35(6), 186-9.

The suggestions are: 1) development of an acceptable criterion for the evaluation of the abilities of students instead of showing their relative position in class competitions; 2) careful grouping of students according to their ability; 3) special programmes for gifted students e.g. allowing them to skip grades, early admission to colleges, enrichment of knowledge through special classes, summer courses and honours courses; 4) adequate provision for audio-visual aids; 5) introducing work-experience programmes; 6) organizing home-room guidance programme.

176 **NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING, NEW DELHI:** Indian yearbook of education - first year book - a review of education in India (1947-61). Rev. ed. New Delhi, the Council, 1965-68. [41], 937p.

The first two chapters of Part I describe the functions and activities of the Ministry of Education and the Ministry of Scientific and Cultural Affairs (since November 1963 merged in one Ministry of Education). Chapter 3 discusses the progress of education in Union territories and centrally administered areas. Chapter 4 is an all-India review. The annexure contains: 1) list of universities (1961); 2) list of secondary boards and/or intermediate examinations (1961); 3) the main findings and recommendations of the educational survey (1957); 4) problems of educated unemployment; 5) National Cadet Corps; 6) bibliography covering different aspects of Indian education (285 entries); 7) all-India educational statistics, 1947-61 (60 tables); 8) educational statistics of States which have ceased to exist following reorganization of States. The second part (Chapters 5-19) is devoted to a detailed survey of the educational progress in different States. For each State, statistical data (1960-61) have been given.

177 **SAPRE R N:** Presidential address at the Annual Conference of the Maharashtra State Federation of Headmasters' Association held at Panvel on 1 and 2 November 1968. Maharashtra Educational Journal 1968, 17(3), 62-74.

The white paper on education prepared by the Maharashtra Government [see Indian Educational Material vol. 2, abstract no. 509] has been criticized on three gounds: 1) the importance of pre-primary education has been ignored; 2) although the language policy is quite logical, the provision for teaching Sanskrit is not adequate; 3) the bifurcation of the syllabus after the 7th standard into ordinary and advanced, would deprive the rural students of the benefit of the advanced syllabus, since the quality of education received by them up to the 7th standard would not equip them to go in for the advanced course. Introduction of a common syllabus up to 10th standard and division at the 11th standard have been suggested. Some suggestions are: 1) establishment of 8-10 central schools in every tahsil; 2) vocationalization of secondary education; 3) creation of school complex for improving the standard of education; 4) provision for teacher education involving content course, and teaching techniques; 5) encouraging experienced teachers to write textbooks. Some anomalies in the new grant-in-aid scheme of the Maharashtra Government have also been pointed out.

178 SRINIVASA IYENGER K R: Mainly academic - talks to students and teachers. Bombay, Asia Publishing House, 1968. viii, 304p.

The publication is a selection of 40 recent talks given by the author, Vice-chancellor of Andhra University. The talks reflect the current educational problems concerning the following aspects: school curriculum, science education, engineering education, legal education, medical education, students union, student indiscipline, students and national service, problems of research students, summer school in Telugu language, problems of university and college teachers, and Andhra University.

EDUCATION COMMISSION (1964-66)

179 BHATNAGAR S: Kothari Commission - recommendation evaluation. Meerut, International Publishing House, 1967. vi,208p. 10 ref.

An introduction to the contents of the report of the Education Commission (1964-66). The first 19 chapters cover the following topics: 1) educational and national objectives; 2) educational system, structure and standards; 3) teacher status; 4) teacher education; 5) enrolment and manpower; 6) equalization of educational opportunities; 7) school education; 8) school curriculum; 9) teaching methods, guidance and evaluation; 10) administration and supervision of school education; 11) objectives and improvement of higher education; 12) enrolment and programme - higher education; 13) governance of universities; 14) agricultural education; 15) vocational, technical and engineering education; 16) science education and research; 17) adult education; 18) educational administration; 19) educational finance. Each chapter is in three parts: (a) central points, (b) recommendations, and (c) evaluation of recommendations. Relevant extracts from the comments published in newspapers and periodicals have been quoted. In the last chapter the following salient features of the report have also been discussed: 1) educational wastage; 2) autonomy of colleges; 3) educational finance; 4) teaching methods; 5) selective admissions; 6) educational structure; 7) external examinations; 8) three-language formula.

EDUCATIONAL PSYCHOLOGY

180 **BABBAN SINGH:** Gifted and average adolescents - a comparative personality study. Alumnus 1967, 1(4), 15-18.

The subjects (age group 14-16) of the study were drawn from two intermediate colleges in Meerut (Uttar Pradesh). Stanford-Binet Test of Intelligence as adapted by the Bureau of Psychology, Allahabad was used for measuring intelligence and identifying gifted students (IQ 130 and above). The Bureau's version of the TAT was used for assessing personality. The results are: 1) intellectually gifted students have significantly higher scores on need of achievement, nurturance and exhibition, while the average group is characterized by the predominant need of harm-avoidance; 2) in the gifted group, emotions and feelings of love and affection, ambition and confidence are predominant, whereas the average group manifested very frequently emotions and feelings of anxiety and inferiority; 3) gifted adolescents possess extraceptive, exocathected, deliberate and creative personality, while the average group is more intraceptive, endocathected and impulsive; 4) the gifted group is more mature, emotional and socially adjusted than the average group.

181 **BADONIA O P, DHODAPKER V G, POHOWALLA J N, SINGH M:** Intellectual development of school age groups of children. Indian Journal of Medical Research 1968, 56(11), 1651-62. 23 ref.

A sample of 300 children (179 boys and 121 girls) in the age group 5-12 attending the paediatric out-patient department of M.Y. Hospital, Indore and reading in a local school was subjected to the study. The Hindi version of Kamat's adaptation (Measuring intelligence of Indian children. Bombay, Oxford University Press, 1958. See also Indian Educational Material v.2, no.1, abstract No.154) of Binet-Simon scale was used. The findings are: 1) the mean IQ for boys was 100.75 and for girls 100.6 with standard deviation of 8.91 and 8.53 respectively. The slight superiority of girls is not significant. The intellectual development of children in this country corresponds to that of the children in developed countries; 2) caste and community had no effect on intellectual development; 3) a good degree of correlation was observed between IQ and performance at school. A child with IQ 120 and above is rarely found below the grade of his chronological age, and the performance of children in the IQ range was always very poor; 3) IQ of children increases as the income of parents rises. However, it declines in the richer group.

182 BHARGAVA V P, LABH SINGH: Determinants of educational choice-behaviour of adolescents (13-16 years). Journal of Psychological Researches 1968, 12(3), 99-103. 7 ref.

A sample of 200 students (100 boys and 100 girls) studying in high schools of intermediate colleges of Agra District (Uttar Pradesh) was subjected to the study. Six educational groups (literary, scientific, commercial, aesthetic, constructive and agriculture) were rated on a five-point scale by students in terms of four dimensions, viz., prestige regard (PR), personal satisfaction (PS), material prospect (MP), and educational-vocational relationship (EVR). The results show that the ranking of the educational groups is determined by the dimensions arranged in order of importance: 1) EVR; 2) PS; 3) PR and MP. Students give high rank to those educational groups which are comparatively easier, and which deal with languages and cultural values of life. They also prefer the groups which ensure financial benefit and prosperity. The ratings of both males and females are similar.

183 GANGULY A K: Variance in verbal intelligence due to different instructional media. Journal of Psychological Researches 1968, 12(3), 123-6. 4 ref.

The object of the study was to test the two hypotheses: 1) that at the secondary educational level a variation in verbal intelligence due to different instructional media would be observed; 2) that boys who receive their secondary edu. through the English medium would be intellectually more alert. A sample of 60 boys was selected from each of the three types of schools: 1) public school with English medium; 2) U.P. Board High School with Hindi medium; and 3) Aligarh Muslim University School with Urdu medium. The 1961 edition of Aligarh Verbal Intelligence Test (Ojha R.K. Intelligence and intellectual stimulation during adolescence. Aligarh Muslim University Ph.D Thesis 1960) was administered to the sample. The main differences of the scores were studied by the analysis of variance technique. The results indicate that the public school system was superior to both U.P. Board and Aligarh University systems and U.P. Board system was better than Aligarh University system. The results thus confirm the two hypotheses.

184 GOVINDARAJACHARYULU S T V: Occupational values of high school students. Indian Journal of Applied Psychology 1968, 5(2), 79-86. 10 ref.

The object of the investigation was to study differences in occupational value preference as a function of age, sex, family income, and rural-urban areas. A sample of 385 high school students drawn from the rural and urban areas of Midnapur district (West Bengal) was asked to choose from the list of 15 job values one value considered most vital in selecting an occupation. The findings are: 1) while girls prefer jobs involving social service, boys attach much importance to high-salaried jobs; 2) urban students prefer a job which is of a new kind ('novelty'). No significant difference is noticed in respect of other job values; 3) students of older age group (15 years and above) place much importance on a secure job and the younger age group (below 15 years) prefers the job value 'social service'; 4) children belonging to high-income-group families like a job where they could express their ideas, talents and schemes ('self-expression'). The vocational counselling implications of the findings have also been discussed.

185 **KAKKAR S B**: Consistency of IQ scores. Journal of Psychological Researches 1968, 12(3), 111-13. 9 ref.

The Lorge-Thorndike Intelligence Test (verbal and non-verbal) was administered to a sample of 60 children (30 boys and 30 girls) reading in Grade V of an English-medium public school, and the test was readministered after an interval of three years when the children were in Grade VIII. Changes in their IQ scores were computed using the method developed by McNemar (Psychological statistics. N.Y., Wiley, 1955. 101, 76). The results are: 1) over a period of three years the IQ scores (verbal and non-verbal) tend to rise. A mean estimated true increase of 3.25 verbal IQ points and 9.82 non-verbal IQ points for boys and similar increase of 2.56 verbal IQ points and 9.22 non-verbal IQ points for girls were recorded; 2) non-verbal scores were less stable than verbal scores. Non-verbal increase was three times the verbal increase. Correlations between Grade V IQ and Grade VIII IQ are greater for verbal scores than for non-verbal scores; 3) there was almost no correlation between estimated true verbal and non-verbal IQ changes both for boys and girls. The findings concur with those of Eagle (*J Ed Res, Madison*. 1966, 60, 164) except that Indian boys and girls of Grade V seem to score more on non-verbal test than on verbal test while their American counterparts show the reverse trend.

186 **MADURANAYAGAM D S, FEROZE M**: Attitude of primary school teachers towards co-curricular activities and non-academic activities. Journal of Educational Research and Extension 1968 5(2), 61-74. 16 ref.

Studies the attitude of primary school teachers in Coimbatore Education district (Tamilnadu) towards organizing co-curricular activities, and non-academic activities like community activities, school improvement and midday meals programmes. An attitude scale and a questionnaire were developed for this study and administered to a sample of 300 teachers (male 93, female 207). The results are: 1) teachers in general have favourable attitude towards their co-curricular and non-academic responsibilities; 2) marital status, educational qualifications and professional training, environment (rural or urban), income, and position in schools do not have any impact on the attitude of teachers; 3) women teachers have a more favourable attitude; 4) teachers working in private schools do not have favourable attitude towards non-teaching work; 5) most of the teachers appreciate the objectives of co-curricular activities; 6) majority of the teachers were agreeable to associate themselves with different community activities, except family planning programme and collection of census of cattle; 7) though most of the teachers consider the midday meals programme a great service, they are dissatisfied with its working. Some consider that the scheme affects the school programme; 8) as regards the school improvement programme, teachers feel that the responsibility for the programme vests in school authorities.

187 **MUTHAYYA B C**: Certain personal data and their relation to level of aspiration. Psychology Annual 1967-68, 2, 1-8. 7 ref.

Studies the impact of some personal data like education of parents, their income, occupation of the father, size of the family, year of birth, and sex on level of aspiration behaviour. A sample of 252 students (153 boys and 99 girls) of the age group 13-17 reading in classes IX and XI were subjected to the study. Six tests (viz., level of aspiration, board, finger dexterity, card sorting, letter cancellation, symbol substitution and computation test) were used to measure the level of aspiration. The results indicate that development of a realistic attitude in the goal-setting behaviour is facilitated by the following factors: 1) college-educated father; 2) high-school-educated mother; 3) father having professional occupation; 4) high economic status of the family; 5) small size of the family; 6) first born child; 7) urban residence; 8) uniform academic success. Boys are more realistic in their level of aspiration behaviour than girls.

188 **PAL S K**: Personality structure of engineering students. Journal of Psychological Researches 1968, 12(3), 136-8. 4 ref.

The Rorschach test was administered to a sample of 50 fourth year engineering students (civil, electrical and mechanical) of the Motilal Nehru Engineering College, Allahabad (Uttar Pradesh). The scoring was done by the method developed by Klopfer et al (Developments in the Rorschach technique. v.1. N.Y, World Book, 1954). Calculations were made to determine percentage and relationship among different Rorschach components. The results show that engineering students possess the following qualities: 1) superior intelligence and adequate capacity for imagination and creative and original thinking; 2) well-balanced impulse control and inner stability which function smoothlyin emotional situations; 3) impulsive life subordinate to and fairly well-integrated with their value system; 4) high level of aspiration not beyond their productive resources; 5) sensitive and responsive to conditions outside; 6) good social adjustment; 8) minimum amount of anxiety; 9) pronounced tendency towards introversiveness.

189 **PRAMOD KUMAR, MATHUR C N:** Nature of task and noise distractability. Indian Journal of Applied Psychology 1968, 5(2), 87-9. 9 ref.

Performance of a sample of 50 undergraduates and postgraduates (25 male, 25 female) reading in the University of Jodhpur, on a mechanical task (cancellation task) and mental task (simple arithmetical calculations) under normal and noise conditions was compared. The noise stress was created by using high-sounding electric bells (sound level of 80 decibels). An introspection report was collected from each subject after the experiment. The sample tended to perform better under normal conditions on the mental task. In the case of the mechanical task no significant difference was observed though the performance of the group on the mechanical task was slightly better under noise condition.

190 **SARKAR S N:** Pro-active inhibition as a function of inadequate consolidation of original learning of a similar language at the pre-primary stage. Journal of Psychological Researches 1968, 12(3), 127-31. 4 ref.

A study with a sample of 2 groups of Bengali-speaking children (age group 7-8) reading in an English medium K.G school in Ranchi proved two hypotheses: 1) there is no marked pro-active inhibition in case of successive learning of two dissimilar languages (English and Hindi or English and Bengali), though a child had not properly consolidated the materials involved in the learning of the language taught first in the school; 2) there is marked impairment of the children's learning to write Bengali script and words, if this learning process begins before the learning of Hindi script is adequately consolidated by them. Pro-active inhibition in language-learning is not only due to the similarity factor but also due to the inadequate consolidation of the previously learnt similar material. On the basis of the findings, it has been suggested that Hindi should be taught to Bengali-speaking children after four years of learning Bengali.

191 SHIVARUDRAPPA G: Study of reading interest of the high school students in Dharwar. Rajasthan Board Journal of Education 1968, 4(4), 8-13.

A questionnaire administered to 200 high school students (boys and girls) in Dharwar revealed the following: 1) students of the age group 12-17, irrespective of their educational, economic and social background preferred to read newspapers; 2) humorous literature was liked by students of all age levels; 3) interest in religious, mythological, romantic and adventurous literature decreased with age; 4) students of the age group 15-17 were not interested in studying lengthy reading material; 5) economic status of the family influences the reading interest while social status does not.

EDUCATIONAL RESEARCH

192 INDIA. MINISTRY OF EDUCATION: /Report of the Review Committee for National Council of Educational Research and Training/. Education and Psychology Review 1968, 8(4), 291-2. NIE Journal 1968, 3(2), 34-8.

The Committee reiterated that at least for another ten years the functions of the Council /= National Institute of Education (NIE)/ should continue to be the qualitative improvement of school education. For this purpose NIE should work in close collaboration with the University Grants Commission. The Committee had suggested drastic reorganization of the different departments. Instead of the present 11 departments there should be only seven falling under two categories: 1) departments concerned with academic work, viz. primary education, science education including central science workshop, social sciences and humanities, and educational psychology; and 2) departments dealing with service and technical assistance, viz. audio-visual education, survey and data-processing, and measurement and evaluation. The quantum of research was satisfactory, but for a large number of research projects, samples were drawn only from Delhi, giving rise to distorted results. Rigorous screening of departmental research projects has been suggested. Only those projects which satisfy the national needs should be taken up. Priorities among different research programmes should also be decided. Development of cooperative research projects with university departments and other institutions of higher learning should be encouraged.

193 KATHURIA R P: Action research - a teacher's tool. Rajasthan Board Journal of Education 1968, 4(4), 22-7. 4 ref.

The steps involved in action research are: 1) deciding the problem area; 2) pin-pointing the problem; and 3) diagnosis of the problem. The diagnosis of the problem helps in formulating the action hypothesis which would then lead to the action plan. Action plan should be carried out strictly in accordance with the fixed time schedule. The different steps involved in formulating the action plan are: 1) collection of data; 2) interpretation of data; 3) seeking the help of principal, colleagues, pupils and library staff in solving the problem; 4) guidance in study, preparation of notes and location of books in the library. After the action plan has been worked out the success or failure of the whole project should be assessed and also a report containing the following information should be prepared: 1) title of the action research project; 2) aims and objectives; 3) action plan; 4) evaluation; 5) bibliography and appendix.

194 PILLAI N P: Survey of educational research in the universities of India. VOC Journal of Education 1968, 8(3), 1-26.

A survey of educational research during the period 1939-61. University-wise distribution of M.Ed. and doctoral theses has been shown. The research studies have been reviewed under the following headings: 1) personality development and adjustment; 2) personality attributes and abilities; 3) learning and related variables; 4) philosophy of education; 5) ethical values in education; 6) curriculum, textbooks and methodology; 7) examination and evaluation; 8) history of education; 9) administration, supervision and finance; 10) teacher education and allied problems. The topics of specialization in different universities at M.Ed. and Ph.D levels have been pointed out. The following suggestions have been made: 1) extending the M.Ed. course to a period of two years for enabling the students to do real research work; 2) conducting expensive and prolonged studies under sponsored research programmes of universities; 3) proper integration of cooperative research studies; 4) organizing more institutional type research and long-term research projects for tackling complex educational problems.

EDUCATIONAL SOCIOLOGY

195 **DE SOUZA A:** Social context of education. Social Action 1968, 18(5), 369-81. 27 ref.

The school as one of the agencies for the socialization of the child should be aware of the socio-cultural forces of the environing society whose enormous potential can augment or retard the achievement of educational objectives. Although formal institutions have limited scope in the total education of the child, they assume greater importance in the Indian situation because of the failure of the family and the local community to function as a dynamic centre for the diffusion of social, cultural and ethical values of the democratic pattern of society. For the growth of modern democratic ethos in society, educational institutions should create a distinctive psychological climate which would impel students to rethink on a personal level their individual interests, goals, values, standards and their meaningful relationship to the larger community. Special efforts should be made to lead the student to the deeper understanding of his environment and to grasp the implications of the simple facts of his social existence. Extensive opportunities should be provided to students belonging to different religions, castes, linguistic and regional groups to work together in some social service project. These would demythologize the social and cultural stereotypes which operate as a psychological block to meaningful communication between different social groups and encourage a defensive attitude to caste, family and regional allegiances.

196 **MANOCHA S M, JAIN S:** Background experiences and sociometric choice. Journal of Psychological Researches 1968, 12(3), 132-5. 9 ref.

The study was undertaken to explore the effects of background experiences (anxiety) on the sociometric choice of students. A sample of 75 male students (mean age 12.5) reading in 7th and 8th classes of Government Higher Secondary School, Chandigarh was subjected to the study. The level of anxiety was ascertained with the General Anxiety Scale for Children developed by Sarason et al (Anxiety in elementary school children N.Y., Wiley, 1960). On the basis of the scores the students were categorized into three anxiety groups: 1) low anxiety (LA); 2) middle anxiety (MA); and 3) high anxiety (HA). The students were then asked to write the names of three of their classmates with whom they would like to sit. Students' choice (preferences or rejections) of the classmates was used as criterion of social acceptance. The results show that sociometric choice has a significant relation with the anxiety level of the subjects. Students from the LA group were preferred more and rejected less, whereas students from the HA group were rejected more and preferred less. Students from MA group were neither preferred nor rejected.

ELEMENTARY EDUCATION

197 INDIA. PLANNING COMMISSION. PROGRAMME EVALUATION ORGANIZATION: Problems of extension of primary education in rural areas. Delhi, Manager of Publications, 1967. vii, 254p.

Report of a diagnostic enquiry in selected areas for assessing the progress of primary education in rural areas and ascertaining the problems and difficulties affecting further expansion. The study specifically covers the following aspects: 1) the extent of coverage of villages by schools and their growth rate since 1947; 2) training and equipment of teachers and their attitude towards the job; 3) increase in enrolment of children in schools; 4) position of enrolment of girls; 5) attitude of parents towards education of children (specially girls); 6) impact of special efforts like mid-day meals, enrolment campaign, free supply of instructional materials on enrolment and attendance; 7) problems of attendance; 8) working of basic schools; and 9) school-community relations. The study was confined to 16 districts, one each from 15 States and one from the Union Territory of Himachal Pradesh. Data were collected through a questionnaire and field investigation, from 142 villages, 132 schools, 2181 parents and 226 teachers. The report is divided into two parts. The first part (three chapters) concerns the objectives and method of study, efforts made by Government to promote primary education since independence with special emphasis on the period covered by Five-Year Plans, and administration of primary education. In the second part (seven chapters) the results have been presented. Chapter eleven summarizes the findings and the recommendations. The text includes 122 statistical tables. The appendices include the questionnaire (p.203-52).

EXAMINATION AND EVALUATION

198 DUGGAL S L: System of internal assessment in education. University News 1968, 6(11), 14-18.

Describes the trimester system of examination prevalent in the Punjab Agricultural University. The academic year is split into three trimesters of 14 weeks each and a summer session of six weeks. There is no annual examination, but the following types of tests are held throughout the year: 1) quiz or short objective test to be answered in 10 to 15 minutes; 2) two one-hour tests, one in the early part of the trimester and the other at the end; 3) a mid-term test of one to two hours; 4) a final examination at the end of the trimester, covering the complete course. The teachers set the question papers and evaluate the answer scripts. A short summer session of six weeks is provided as a complementary session in which deficient students can improve their performance. The advantages of this system of evaluation are: 1) it promotes regular work habits in both teachers and students; 2) students cannot neglect any portion of the subject matter; 3) it fosters discipline among students; 4) the time limit for graduation is not rigid, so that a brilliant student might complete the programme in less than four years while a weak student might take more time.

199 GAYEN A K, NANDA P, DURAI P, BHATTACHARYA N, MUKHERJEE H N: Measurement of achievements in physics and chemistry. Kharagpur, Indian Institute of Technology, (for National Council of Educational Research and Training) 1967. xviii, 154, xxxviiip. (Research Project on Examination, 4)

Presents the result of an analysis of the syllabi, question papers, and answer scripts in physics and chemistry of the Higher Secondary examination conducted by the Board of Secondary Education in 1960, and a follow-up study concerning the examination of 1965. The following points have been taken into consideration: 1) the percentage of failures, passes and non-attempts for the alternative question items; 2) the groupings of items and balancing of alternatives; 3) difficulty values and discriminating powers of the question items; 4) the relationship of marks in a particular item with the total marks; 5) a comparative study of scores in one paper of a subject with those in another, and with the total marks in the subject; 6) content analysis of syllabi and question papers; 7) performance of candidates in the two examinations. Attempts have also been made to study the structure of question papers and the appropriateness of question items from the viewpoint of their discriminating power, difficulty value, reliability and validity, and their relationship with the syllabus. The first chapter, in two sections, gives the details of the study and findings of observations relating to physics. The second chapter deals with chemistry. The last chapter gives the summary and conclusions. Three appendices give: 1) some expert suggestions in improvement of examination questions in physics and chemistry; 2) modernization of syllabus, textbooks and teaching of physics and chemistry in secondary schools; 3) evaluation of learning and scaling of examination marks.

200 JAIN D C: Comparative study of different systems of assessment. Teacher Speaks 1968, 5, 112-6.

Three matched group of students (50 in each) reading in Class VIII were used for the study. Each group was subjected to one of the three systems of assessment for one year: 1) 'three-terminal system' (students were given only three terminal tests); 2) 'monthly assessment system' (periodical assessment of daily work of students converted into marks at the end of each month); and 3) 'monthly test system'. The marks obtained by students at the annual examination were taken as the criteria for determining effectiveness of the systems. The results showed that students subjected to the 'monthly assessment system' were superior to those subjected to the 'monthly test system'. No such positive results were available about the comparative efficacy of the 'three-terminal system' either with regard to the 'monthly assessment system' or the 'monthly test system'. The project was evaluated by the teachers who participated in teaching on a five-point scale. The majority of the teachers were of the opinion that students were regular under the monthly assessment system. But from the view point of learning, 'monthly test system' was better. The workload of teachers was highest in the monthly assessment system. Under the existing conditions, the 'three-terminal system' is administratively most convenient with large classes.

201 KAKKAR S B: Examinations - an opinion survey. Educational Trends 1968, 2(3-4), 38-42.

A sample of 184 teacher students (male and female in equal number) reading in Government Training College, Jullundur (Punjab) was asked to state whether examinations should be held and to justify their answers. About 51.8% were in favour of examinations while 46.4% were against. The examination was favoured on the grounds that it evaluates the achievement of pupils and stimulates proper learning and teaching. The 'fear' element in examination was mentioned by about 66% of the subjects. This reason and most of the other reasons stated by the subjects emanate from the existing defective system of examination. It has been pointed out that examination is an efficient tool and if properly employed is likely to achieve the objects of education. Both favourable and unfavourable arguments have been listed along with the percent frequency of mention.

202 KHAN J A: Oral examination. Orissa Education Magazine 1968, 12(1), 9-12.

The importance of oral examination has been discussed and the following suggestions have been made: 1) to begin with, oral examination may form part of internal assessment; 2) it should not be part of a particular subject; 3) the examination should be aimed at testing the following points: (a) students' ability to speak the language fluently and effectively, (b) ability to recall suitable and proper words, (c) capacity to organize the contents systematically, (d) modulation of voice, (e) pronunciation, (f) capacity to use suitable gestures and intonations for effective expression, and (g) capacity to express freely; 4) weightages to be given to different aspects are: vocabulary 20%, pronunciation 20%, grammatical corrections 20%, fluency 10%, thought content 20%, and gestures and manners 10%.

203 MEHDI B: Examination failure and pupil adjustment. Teaching 1968, 41(1), 9-13. 6 ref.

The findings of research on harmful effects of failures on personality have been discussed and the following suggestions have been made: 1) there should be no examination at the elementary stage of education. However, a systematic record of progress should be maintained. The child should he helped to overcome difficulties through a series of remedial programmes. If at the end of the five-year period, a child is not found suitable for admission in junior high schools, he may be detained till he attains the specified standard; 2) a similar policy should be adopted at the junior high school stage and the school leaving certificate should record the strong and weak points of the pupil assessed on a nine-point scale; 3) at the higher secondary stage, there should be two levels of examinations - one for those who want to pursue higher education, and the other for pupils desirous of terminating at the higher secondary stage.

204 **ROY G K D:** Improvement of a question paper. NIE Journal 1968, 3(1), 50-3.

Presents details of a proforma designed by the author for the guidance of the paper-setters. The proforma consists of four parts: 1) instructions - general and specific, e.g. use of simple and clear language in framing questions, nature of questions, allotment of marks; 2) the syllabus divided into group-areas and further sub-divided into units; 3) analysis of the data on pupils' performance in the previous year's examination; 4) analysis of the question papers of the last three years in respect of three items: 1) weightage to objectives (knowledge, understanding etc), (b) weightage to content (group areas and units), and (c) weightage to the type of questions (essay, short answer, and objective). This part should contain necessary instructions regarding the weightage to be given to three different aspects for the current year's examination.

205 **SARANGI T:** Analysis of the general science question paper of the Annual H.S.C. Examination 1968. Orissa Education Magazine 1968, 12(1), 13-16.

The analysis reveals the following points: 1) disproportionate weightage was given to the three objectives (knowledge - 82.6%, application of knowledge - 11.1% and skill - 6.3%) of the general science course. Since the application of knowledge is as important as its acquisition, equal weightage (40%) should be given to them; 2) although all the units of the subject were represented in the question paper, the distribution of weightage to the units is not proportionate to the importance of the unit. This was ascertained by comparing the percentage of marks allotted to each unit with the pages devoted to each unit in the standard textbooks prescribed by the Board of Secondary Education, Orissa; 3) undue weightage has been given to essay-type question (66.3%), as compared to short-answer (28.4%) and objective (5.3%) type questions; 4) alternative questions were comparable with respect to content, objective, difficulty value, and length of answers.

206 **VAHALIA K V, WAGH S S, BALIGA J K, DE'SOUZA E J:** Multiple choice examinations - a preliminary study of its usefulness and applicability in student assessment. Indian Journal of Medical Education 1968, 7(5), 495-8. 5 ref.

Multiple-choice type of examination was introduced by the authors in the Anatomy Department of the T N Medical College, Bombay on an experimental basis in April 1963 and subsequently made a part of the practical examinations. The test was constructed after detailed planning and later subjected to thorough statistical analysis. The advantages of this method are: 1) influence of personal factors can be avoided as the answers can be checked by computers or non-skilled personnel; 2) the whole curriculum can be covered in two papers of three hours' duration each; 3) unfair practices, both before and after examinations, can be curbed; 4) correction can be finished quickly; 5) precise and specific learning habits among students can be encouraged; 6) mathematical analysis and statistical studies can be carried out.

FINANCE

207 **AZAD J L:** Trends in university finances in India. NIE Journal 1968, 2(6), 63-9.

An analysis of university finances during the years 1949-63. A study of overall financial resources available for higher education reveals the following: 1) resources available for arts, science and commerce education were inadequate; 2) university education received lower priority then primary and secondary education; 3) though the government contribution had been rising, it was not proportionate with the university requirements. A comparative study of the financial structure of various institutions like universities, affiliated colleges, professional and special education colleges, reveals the following points: 1) though the rise in government contribution was more sharp for affiliated colleges than for universities, the former had to depend more on fees as a source of income; 2) endowments registered a steep downward trend; 3) private colleges provided higher education to 75% students but they shared only about 66% of the total university expenditure. The suggestions are: 1) equalizing the financial position of all university institutions through a drastic modification in the scheme of priorities in university programmes; and 2) selection of meritorious students alone for university education.

208 INDIA. UNIVERSITY GRANTS COMMISSION: Report for the year 1966-67. New Delhi, the Commission, 1968. vii, 83p.

The following priorities would be observed in providing development grants to universities during the Fourth Five Year Plan: 1) continuing schemes from the Third Plan; 2) libraries and journals; 3) appointment of additional staff; 4) equipment; and 5) buildings. During the year under review, the total grant amounted to Rs.164.9 million which included the following: 1) development grants to universities: Rs.98.1 million (science Rs.23.9 million humanities and social sciences Rs.13.1 million engineering and technology Rs.15.5 million and miscellaneous schemes Rs.45.6 million; 2) maintenance grants to central universities: Rs.32.9 million; 3) maintenance grants to colleges under Delhi University: Rs.13.9 million; 4) development grants to colleges (2479) affiliated to various universities: Rs. 14.9 million; 5) seminars, conferences etc: Rs. 0.6 million. Development grants cover the following aspects: 1) construction of hostels, library buildings, staff quarters, and university buildings; 2) equipment; 3) library books; 4) staff salary and maintenance; 5) Centres for Advanced Study; 6) scholarships and research fellowships; and 7) student welfare. It has been observed that the financial allocation for development programmes in 1966-67 expressed in rupees per student and also in terms of purchasing power is less than that made in 1961-62. The appendices include the following: 1) growth of student enrolment, 1956/57 - 1966/67; 2) distribution of teaching staff in universities and affiliated colleges according to designation 1964/65 - 1966/67; 3) degrees awarded 1962/63 - 1964/65

209 PANCHAMUKHI P R: Educational finances in India. NIE Journal 1968, 2(6), 22-5.

On the basis of the analysis of the objective-wise and source-wise educational expenditure in India during the years 1950-51 and 1965-66, the Centre's role in financing education has been emphasized and the following suggestions have been made: 1) fees should not be considered as a major source of revenue; 2) private contributions should be encouraged by providing income-tax concessions in respect of educational expenditure; 3) while the States and local authorities should be responsible for the educational management, educational finances should be vested with the Centre; 4) besides providing matching grants for the State revenue through conventional taxes like property taxes and educational cesses, the Centre should also finance 30% of the deficit in standard total costs and the remaining 70% should be paid by the State. Unspent money should be credited to the States. A good plan of educational finance should: 1) conform to the broad economic and educational requirements; 2) aim at equalization of educational opportunities in different areas of the country; 3) lead to greater economy and efficiency. It should not act as a deterrent to other sources of finance.

GUIDANCE AND COUNSELLING

210 JAIN S C: Guidance services in schools. Educational India 1968, 35(5), 151-3, 154.

The need for providing guidance services in educational institutions, specially in secondary schools, has been stressed in view of their special place in the scheme of education. Secondary school students need guidance mainly in (a) choosing suitable vocations, (b) selection of proper higher courses, (c) facing adolescent problems. Since the financial position of the country does not allow the appointment of trained counsellors in secondary schools, teachers should be given the responsibility of providing guidance services. The other factors which justify the teachers' role as a guidance worker are his intimate contact with the students, the training he receives in educational psychology and his responsibility for the maintenance of the educational and intellectual records of pupils.

211 **MATHUR V S:** Guidance as a profession. Teaching 1968, 41(1), 27-31.

Since teachers can closely observe their students' needs, habits, attitudes, interests, and scholastic progress, all schools should have teacher-counsellors, who will undertake both teaching work and guidance and counselling activities. Besides providing guidance in the choice of future careers and courses, the teacher counsellors should also be responsible for: 1) organization of remedial programmes for backward children; 2) organization of enriched educational programmes for gifted children who remain neglected in the ordinary class room; 3) provision of personal guidance to maladjusted children; 4) undertaking small research projects. The worksheet followed by the Government Training College at Chandigarh for the six weeks' orientation course in guidance work has been presented.

212 PANDHARIPANDE P S: Teachers' attitude towards the contents of the cumulative record form. Journal of Education and Psychology 1968, 26(3), 182-8. 15 ref.

Considering the importance of cumulative record form (CRF) as a tool of evaluation in supplementing the information needed for guidance, an investigation was conducted: 1) to determine the number and the nature of mental abilities and the personality traits to be included in the CRF; and 2) to find out the confident level of the teachers regarding their assessment of different traits and abilities. Three techniques were used for collecting data: 1) questionnaire; 2) rating scale; and 3) interview. A sample of 120 trained teachers and headmasters of secondary schools with 7 years' experience was subjected to the study. The results are: 1) teachers seem confident in assessing the following abilities: general intelligence, verbal ability, numerical ability, and practical ability. The data are not in favour of scientific ability; 2) personality traits like sociability, self-control, cooperation, leadership, and trustworthiness can also be confidently assessed by teachers; 3) personality traits like cheerfulness and obedience can be incorporated in CRF; 4) the large size of classes, lack of time, crowded syllabus and curriculum, limited variety of situations, and lack of proper training of teachers are the major difficulties in the estimation of the personality traits in the school situation.

HEALTH CARE

213 **GANGULY S:** Problem of postural defects among school-going children. Bulletin of the West Bengal Headmasters' Association 1968, 17(10), 384-8.

The factors contributing to postural defects among school children and the types of defects have been mentioned. Since postural defects adversely affect the academic career of children, a scientific programme of physical education and health education including a series of graded remedial exercises has been recommended for the correction of acquired postural defects. Some simple physical exercises have been listed.

HIGHER EDUCATION

214 **BILGRAMI K S:** Reconstruction of higher education - challenge to universities. Mail 7 December 1968, p.6, Cols. 3-7. 1730 words.

Universities have failed to maintain and elevate standards of education, and preserve and promote national integration Since most of the universities owe their existence to regional sentiments, it is unlikely that they would help curb regionalism. The following suggestions have been given to develop universities into healthy academic community: 1) selective admission to higher education; 2) transfer of undergraduate courses to affiliated colleges; 3) meaningful linking of all stages of education; 4) association of universities with the secondary boards; 5) associating young and energetic teachers with the drafting of courses of study; 6) modernization of courses in keeping with the social, economic and political conditions of the country; 7) inclusion of young teachers in faculties and academic councils; 8) encouraging group discussion and self-study; 9) introduction of internal assessment. Examination work should be non-remunerative;

10) strengthening the relationship between teachers, authorities and students; 11) increasing the number of higher posts in each department; 12) setting up permanent disciplinary committees consisting of teachers, students, parents and representatives of local political parties; 13) introduction of programmes of extra-curricular activities to establish contacts between teachers and students; 14) exchange of teachers between various regions, introduction of diploma courses in all regional languages in various universities, reservation of seats for students from other regions for the promotion of national integration.

215 INDIA. UNIVERSITY GRANTS COMMISSION: Centres of advanced study in Indian universities. Delhi, the Commission, 1967. 81p.

The Commission has undertaken in consultation with the universities a scheme for developing a limited number of university departments for advanced training and research in selected fields. The scheme is intended to encourage the pursuit of excellence and team-work and to attain international standards. The departments are to be selected on the basis of quality, reputation, contribution to research, and potentiality for further development. The Commission, in the first instance, had started 26 Centres for Advanced Study (now 29. Hindustan Times 9 June 1968, p.14, Cols. 1-2) covering the following fields: physics, chemistry, biochemistry, botany, zoology, geology, mathematics, astronomy, economics, history, philosophy, Sanskrit, linguistics, and education. The publication describes briefly the activities of the Centres.

216 KUNDU C L: Role of Indian universities in the enrichment of national life - a few observations. Progress of Education 1968, 43(3), 94-9.

Universities should contribute to the enrichment of national life by: 1) giving specialized training and education which would equip students with necessary knowledge helpful for the cultural and technological development of the nation; 2) offering integrated scheme of education; 3) inculcating a sense of national and international outlook in students; 4) imparting instruction in different subjects in their totality without much departmentalization; 5) imparting vocational training and guidance in cooperation with industries; 6) providing political training of the right type.

217 **RANGANATHAN S R**: Productivity and partnership in university education. Library Herald 1968, 10(1), 1-18.

Education has been defined as the development of the whole personality of a man. With the aid of schematic diagram, the factors involved in developing the personality of an individual as well as of society have been explained. The role of university education in this respect has been discussed. Its role is not merely the enrichment of memory but also the sharpening of the intellect. The need for the collection of facts and ideas by the students from the library as an essential supplement to classroom work has been stressed. For this purpose, the librarians should take over the students at the point they are left by the teachers. In order to increase the productivity of university education, it should cease to be curriculum-centred and textbook-centred but should become student-centred and library-centred and there should be a close partnership between librarians and teachers.

218 **VERMA M R**: Education for employees to help them advance in their profession. Yojana 1968, 12(20), 5-6.

Although a limited number of organizations provide opportunities to the scientific and technical staff to improve their professional qualifications and to keep pace with new knowledge in their respective fields,no institutional arrangements exist for this. The following suggestions have therefore been made: 1) the Council of Scientific and Industrial Research (CSIR) should make arrangements with universities and colleges located in the vicinity of CSIR laboratories to arrange evening classes for graduate and postgraduate courses; 2) the Council should also set up its own training institutes at its laboratories which should be given the status of a university; 3) study-leave rules should be suitably modified to enable scientific and technical personnel to pursue further studies; 4) professional scoieties should institute courses and conduct examinations for associateships and fellowships; 5) persons acquiring higher qualifications should be suitably rewarded.

219 **VIJ D R**: Peep into college teaching. Haryana Journal of Education, 1968, 1(3), 35-44.

A questionnaire-cum-evaluation schedule was administered to 46 lecturers (28 men, 18 women) having 1-3 years (a few having 10 years) of teaching experience and working in government arts colleges in the Punjab. The views of the large majority of teachers are: 1) there are few inspired and dedicated teachers; 2) the physical conditions of work in colleges are unsatisfactory; 3) as observed by the Education Commission, the academic year in colleges alternates between slackness during the session and strain at the time of examination; 4) a large proportion of teachers suffer from financial worries; 5) teaching is mechanical and listless; 6) there is no healthy competition among teachers in intellectual and professional pursuits; 7) there is lack of harmony and trust between senior and junior teachers; 8) students are not adequately prepared at the secondary stage to enable them to pursue higher studies in universities; 9) students learn by rote method only, and do not discuss intellectual matters with teachers or fellow students; 10) teachers discuss among themselves only matters relating to service conditions; 11) teachers do not understand the objectives of internal assessment; 12) coeducation does not pose any problem; 13) teachers should know each student individually. Almost all the teachers interviewed were ignorant of the principle of transfer of learning. The problems faced by teachers, ranked in order of percentage of response, are: favouritism and bossism by the head of the institutions, political or other pressure to secure admission and influence examination results, indiscipline in the classroom, non-cooperation among teachers, heavy workload, threats from student unions. The forms of indiscipline in the classroom are passive listening, inattention, and creating noise.

HISTORY

220 SAHAY B K: Education and learning under the great Mughals, 1526-1707 A.D., with a special reference to contemporary literature. Bombay, New Literature Publishing Co., 1968. xi, 238p. 325 ref.

Chapter I dealing with Muslim education during the period under review, covers general principles of education and various curricula meant for primary, secondary and higher education, and the chief contres of Muslim learning. Bihar was one of the chief centres of Muslim learning. Chapter 2 deals with the prevalent system of Hindu education during the period. The royal patronage for the development of Hindu education and learning has also been pointed out. Chapter 3 describes the system of education for the Mughal Princes. The education of women has been discussed in considerable detail. The available documents indicate the prevalence of excellent systems of women education both among the Hindus and the Muslims and the systems of co-education. Chapter 5 describes the libraries and their management during the Mughal period. Apart from the Imperial library of the Mughals, most of the educational institutions, nobles and scholars used to maintain libraries. Chapter 6 has been mainly devoted to the study of Mughal sovereigns' scholarship and patrnage of learning.

INSTRUCTIONAL MATERIAL AND AIDS

221 GREWAL J S: Teaching mathematics as a laboratory subject. Indian Education 1968, 7(12) & 8(1), 27-35; Mathematics Education 1968, 2(3), 62-8. 7 ref.

The teaching of mathematics should be stimulated by making it laboratory oriented and applied in nature. A mathematics laboratory should, therefore, be set up in each school. A suggested list of equipment suitable for four stages of school education, viz. lower primary, higher primary, lower secondary and higher secondary, has been presented. The list includes inexpensive charts, graphs, geometry models and illustrations for explaining different mathematical operations. Besides bulletin boards displaying topics of current mathematical interest, news items, and material prepared by students should be provided. The laboratory should be equipped with a well-stocked library.

222 JOHN V V: Primacy of the second-rate - the textbook racket. Times of India 5 December 1968, p.10, Cols. 3-5, 7. 1500 words.

Very little attention is paid by educational authorities to the preparation and improvement of textbooks. Bureaucratic inertia, vested interests and unintelligent notions of economy are the reasons. Nationalization of textbook production has not been successful either in eliminating abuses in selection of textbooks or in improving quality - both in content and get-up. In this regard, even the national policy resolution on education is vague. The progress of the programme of textbook production of the National Council of Educational Research and Training (NCERT) is very slow. The Government, instead of merely monopolising textbook production, should prepare model textbooks and allow publishers to produce them. Independent boards of experts should then adjudge their respective merits and choose accordingly. Further, it may be advisable to approve several alternative textbooks and leave the choice to individual institutions. The ideal would be to allow selection even from outside the approved list. It is a mistaken notion that national unity could be promoted by using the same textbooks. While NCERT could produce models of quality books, individual efforts at all levels and in all sectors in producing good books should be encouraged.

223 SHARMA M P N: National board of school textbooks. Searchlight 21 October 1968, p 4, Cols. 4-6. 839 words.

In accordance with the recommendations of the National Integration Council and the Education Commission, the Ministry of Education had launched an intensive programme for the qualitative improvement of school textbooks. For developing this programme, State governments have set up autonomous corporations. At the national level the activities of the National Council of Educational Research and Training (NCERT) has been expanded. Setting up a National Board of school textbooks has been recommended by the 34th meeting of the Central Advisory Board of Education to make policy decisions regarding the problems. The functions of the Board would be: 1) providing a forum for a continuous dialogue between the Centre, the States and other agencies involved in the production of textbooks; 2) deciding the criteria for textbooks for different subjects at different levels; 3) advising the Central and State governments on matters relating to qualitative improvement, production, distribution, pricing and sale of textbooks; and 4) recommending measures to promote national intgration through textbooks.

224 SINHA D K: Few thoughts on educational research in new mathematics at the school level. Mathematics Education 1968, 2(4), 96-7.

Discusses the role of research in the production of instructional material in new mathematics. Research should be carried out in two stages. In the first stage content-material should be developed. The mathematicians, who may not be necessarily school teachers, should be entrusted with this work. The materials to be developed are: (a) curriculum, (b) curriculum guides, (c) textbooks, and (d) teachers' guides. The material should be flexible and adaptable to different school situations. The next stage should be an evaluation of the materials thus produced with the help of psychologists. The mathematician should lay down the objectives of writing these materials while the psychologist should translate those objectives into terms that can be measured and then devise effective procedures for achieving the objectives.

LANGUAGE PROBLEM

225 MUKHERJEE L: Survey of the medium of instruction in Uttar Pradesh. Education 1968, 47(10), 10-20. 27 ref.

The history of study and teaching of language and the medium of instruction is marked by the decline of Sanskrit, introduction of Persian by Muslims and the birth of Urdu, the emphasis on Hindi, and the consequent decline of English. With the advent of the British rule, the study of Sanskrit, Hindi, and Urdu were either totally neglected or were relegated to secondary position and the study of English dominated the curriculum. Soon after independence study of Hindi was stressed and the study of Urdu, the second language of the State was consistently neglected. The obligation of learning a modern Indian language under the three-language formula was circumvented by introducing a paper on Sanskrit. Study of English was virtually abolished. Now English is retained as a compulsory subject and as the medium of instruction only in the Aligarh Muslim University.

MORAL EDUCATION

226 SRI PRAKASA: Religious and moral instruction. (In his Education in a democracy. Meerut, Meenakshi Prakashan, 1967. 114-40).

Based on the draft prepared for the Committee on moral education appointed by the Government of India in 1959. An objective, comparative and sympathetic study of all important religions of India including their underlying philosophies and ethical codes has been advocated. Special stress has been laid on the teaching of moral and spiritual values with a view to inculcating good manners, social service and true patriotism in children. The following are the suggestions regarding the curriculum at different stages of education: 1) Elementary stage - (a) group singing in the morning, (b) including simple and interesting stories about the lives and teachings of great people in the syllabus for language teaching, (c) showing great works of art and architecture closely connected with the living religions of the world through audio-visual aids in the teaching of geography, (d) two periods for moral instruction every week, (e) developing an attitude of service and respect for manual labour, (f) helping students in character building and in developing the spirit of true sportsmanship through physical education programmes; 2) Secondary stage - (a) observing two minutes' silence in the morning assembly, followed by readings from the great literature, (b) including the essential teachings of the great world religions in the curriculum for social studies and history, (c) assigning one hour a week to moral instruction, (d) organizing social service programmes, (e) including qualities of character and behaviour of students in the over-all assessment; 3) University stage - (a) organizing group meetings for silent meditation in the morning, (b) including a general study of different religions in the general education course in degree classes, (c) instituting a postgraduate course in Comparative Religion and stressing the following topics in the Honours and M.A. courses in humanities and social sciences: i) Comparative Religion; ii) History of Religions; and d) introducing a long period of social service in all universities.

POLICY AND PLANNING

227 ECONOMICUS, PSEUD: Working of the employment exchanges. Economic Times 8 October 1968, p.5, Cols. 3-6; p.4, Cols. 7-8. 2165 words.

Based on a survey conducted by the tripartite Study Group on Employment and Training formed by the National Labour Commission. During the Third Plan the annual rate of growth of employment opportunities in organized sectors was 5.6%. But a decelerating trend was noticed since 1964, and in 1967 it was as low as 0.3%. The private sector was more seriously affected than the public sector. Although engineering personnel were in surplus (over 6,000 graduates and 28,000 diploma holders), there is shortage of medical and paramedical personnel, particularly for serving in rural areas. Similar shortage of persons possessing critical skills necessary for economic growth (e.g. experienced engineers, technicians, university teachers, secondary teachers for mathematics and science, competent stenographers and accountants) is also recorded. Such imbalances have been attributed to the lack of mobility among trained personnel and unattractive terms and conditions of service. The Study Group had also made some recommendations for the better functioning of the employment exchanges.

228 GADGIL D R: Approach to India's educational problems. Indian and Foreign Review 1968,5(17), 19-20.

The main consideration in regard to planning relates to large differences in conditions and attainments as between State and State and district and district. What should be attempted within the next five years with available resources in a given State locality has to be related to the existing situation with its achievement, its lacunae and special needs. Therefore, district should be adopted as the basis of administration and planning.

229 INDIA. PRESIDENT, 1967- . (ZAKIR HUSAIN): National system of education. [Speech delivered at the special convocation of the Annamalai University (Tamil Nadu) on 8 September 1968] Journal of Educational Research and Extension 1968, 5(2), 48-51.

A plea has been made for the proper integration of two parallel systems of education developed between 1921-1947: 1) a modern system of education based largely on the objectives and ideas borrowed from Western educational system and committed mainly to a programme of liberalization and pursuit of knowledge but not intimately with the life, needs and aspirations of the communities, and 2) national system of education introduced by Gandhi, emphasizing a synthesis of intellectual and manual work. The integrated national system would bridge the gulf between intellectuals and masses through programmes of social organizational service, and the developments of the languages of the people along with the study of English and other international languages. It has been stressed that universities should take a lead in this programme.

230 INDIA. PLANNING COMMISSION: Approach to the Fourth Five Year Plan in education - a note approved by the Planning Commission. Bulletin of the West Bengal Headmasters' Association 1968, 17(10), 375-83.

The note covers the following areas: I. Equalization of educational opportunities: 1) immediate efforts to implement the directive contained in article 45 of the Constitution relating to primary education; 2) expansion of secondary and higher education without affecting the standard; 3) linking professional, technical and vocational education and postgraduate education to future manpower needs; 4) emphasizing inter-disciplinary and intra-disciplinary research, and applied research; 5) expansion of adult education programme through voluntary participation, systematic educational programme and the involvement of industrial and commercial undertakings; 6) expansion of facilities for part-time education; 7) full utilization of facilities in existing institutions rather than creating a new ones. II. Programmes of consolidation and qualitative improvement: 1) formulation and implementation of comprehensive teacher education programme; 2) improvement of physical facilities in educational institutions; 3) development of student services; 4) improvement of curriculum, teaching methods and evaluation; 5) adoption of programme for the preparation and production of instructional material; 6) improvement of science education; 7) development of programmes for physical education and sports and games. III. Technical education: 1) establishment of close relationship between technical education and industry and commerce; 2) introduction of non-formal courses to help horizontal and vertical mobility of trained personnel; 3) introduction of short-term courses in management, sales and accountancy for technical personnel; 4) pre-service and in-service training of technical teachers; 5) research in development of curriculum, preparation of textbooks and teachers' guides. IV. Cultural programmes. V. Educational planning and administration and finance: 1) streamlining the planning and administrative machinery; 2) establishment of planning cell in State Directorates of Education and keeping close relation with NCERT; 3) adoption of district as the principal unit for planning, administration and development of education.

231 INDIA. PLANNING COMMISSION. EDUCATION DIVISION: Strategy of educational development. NIE Journal 1968, 2(6), 26-31.

The governing principles for an appropriate strategy of educational development which would ensure immediate results, improve the efficiency of the educational system, and tap new resources are: 1) streamlining the planning, implementing, and evaluating machinery; 2) winding up fringe activities and ensuring that every new scheme is carefully considered before implementation; 3) drawing up a perspective plan on the basis of manpower needs of the economy, social demand, availability of financial and human resources; 4) giving priority to items which require organizing skill and technical competence rather than large financial resources; 5) making use of tried methods of improvement rather than adopting new ones; 6) judging the financial implications of new methods; 7) concentrating on essentials only e.g., at the elementary stage resourceful and sincere teachers are more important than buildings, midday meals, free clothing etc.; 8) developing curriculum around three essential needs of the people: food, clothing and shelter; 9) securing community participation for putting up school buildings, providing midday meals and raising local financial resources; 10) improving educational technology; 11) tapping local financial resources to meet local needs. In this respect, the recommendations of the Education Commission (1964-66) for large central and centrally sponsored sectors have not been favoured. The following priorities in planning have been listed: 1) provision for universal primary education particularly in backward areas and for backward sections of the community including girls; 2) reduction of wastage and stagnation; 3) expansion and improvement of science education and linking it with urgent national needs; 4) establishing links with industry for improvement of vocational and professional education; 5) educational research; 6) expansion of adult education programme by voluntary agencies and with community support; 9) identification of talent; 10) development of part-time and correspondence courses.

232 JOHN V V: Education policy irrelevant to issues of quality and cost. Statesman 5 October 1968, p.6, Cols.4-6; p.7, Col.8. 2260 words.

The main defect of the present educational system is not the absence of a national consensus on objectives or methods but the low standards of education and the high rate of wastage. The remedy is not any national measure to regulate educational progress but the injection of a spirit of daring at as many points in the educational endeavour as possible, and a sense of urgency. A beginning could be made with improvement in the quality of the common schools to an extent which may make the public schools less attractive. The three-language formula should be made compulsory for the Central Government officers but not at the secondary school stage. The universities should specify the language proficiencies needed for advanced studies. Duration of courses in languages as well as in other subjects should be not only related to the work involved but should also take note of the variations that have to be made for slow learners and highly gifted ones. The advisability of forming major universities and spending huge amounts of money on the improvement of regional languages has been questioned since the good educational institution has within itself a principle of growth, that cannot be replaced by external decisions; linguistic enrichment should come from the zeal and exertions of scholars, writers and the book trade, while official patronage can only make a partial contribution to it.

233 KOTHARI R: Tasks within. Seminar 1968, No.112, 14-19.

The question of exploitation of social science research scholars and research facilities in India by dominant nations for their political gains has been discussed. Whatever the motivation of foreign pattern of research, foreign participation in research projects has resulted in increased allocation of resources to research and tremendous growth of cross-cultural and cross-national research activities. Instead of outright rejection of collaborative proposals, the following steps should be taken to prevent the misuse of research facilities by foreign agencies: 1) raising adequate internal resources to prevent lopsidedness in research participation; 2) improving the status of Indian scholars so that foreign agencies recognize the authority of Indian scholars in deciding the goals and priorities of research, its planning and execution, and the control and storage of data. Other suggestions are: 1) spelling out the research support policy; 2) laying down broad guidelines on social science research by the appropriate authority and financing the useful projects; 3) appointing a permanent screening body (a) to examine research proposals for foreign agencies, comment on their merits, determine the source of funds, and evaluate them from the point of national interest, b) to screen research proposals of local scholars and comment on their academic merit, (c) to make policy recommendations on the availability of funds for certain priorities in social science research and (d) to make observations on the desirable relationship between government servants, academic researchess and non-governmental sources of funds; 4) establishing a data archival centre for storing data collected by foreign agencies.

234 KRISHNAMURTY S: New trend in educational planning - institutional planning. Rajasthan Board Journal of Education 1968, 4(4), 48-53. 2 ref.

It is necessary to make each institution a unit of educational planning. The institutional planning has the following characteristics: 1) basis for the district and State level planning; 2) plans prepared by the heads of institutions and teachers; 3) annual and five year plans; 4) basis for school inspection; 5) maximum utilization of the available resources. Each school should have a planning council to be headed by the head of the institution with all teachers as members. Standing committees for different activities e.g., academic affairs, co-curricular activities, teaching-learning aids, should also be formed. The areas to be covered by planning are: instruction, class work, syllabus, examinations, co-curricular activities, and personal service.

235 **MATHUR M L**: Unemployment among engineers - causes and remedies. Vishwakarma 1968, 9(7), 5-10.

The causes of unemployment among engineers are: 1) wrong assessment of technical manpower requirements; 2) recession in industry and reduction in the Plan outlay. The long-term measures suggested to solve the problem are: 1) fighting recession through import substitution and export promotion; 2) development of well-organized industrially oriented postgraduate courses; 3) selective reduction of intake at undergraduate level; 4) diversification of engineering courses. Degree-level courses should be introduced in new branches like nuclear engineering, automobile engineering, instrumentation and control, refrigeration engineering; 5) liaison between technical institutions and industry, particularly the small-scale industry which has a considerable employment potential. The short-term measures are: 1) filling the existing vacancies; 2) employing more engineers by the Public Works Department instead of utilizing the services of contractors; 3) replacement of non-technical directors and managers by technical personnel; 4) introducing apprentice training of fresh graduates; 5) formation of cooperatives of engineers; 6) establishment of Technical Translation and Terminology departments for the production of instructional materials in regional languages and employing engineers in such establishments.

236 **NAIR P A**: Employment market in an industrial metropolis - a survey of educated unemployment in Bombay. Bombay, Lalvani Publishing House, 1968. 110p.

The study is based on the data available from the 'live' and 'dead' registers of the employment exchange. The object of the study of the major characteristics of the supply and demand of educated personnel in a representative industrial and commercial metropolis was to obtain some guidelines for manpower policy and educational planning in India. The first chapter describes the methodology of the study. In the second chapter, an attempt has been made to present the broad trend affecting supply and demand of the educated unemployed. In the third chapter, a detailed investigation into the structure of educated unemployment and labour market has been made on the basis of data collected from the individual index cards of registrants. In the fourth chapter, comparison has been made of the major characteristics of the employment seekers (as revealed by the live register) to those who no longer seek jobs (as revealed by the dead register). A summary of the findings has been presented in the fifth chapter. Some findings are: 1) matriculates constituted the bulk (75%) of the unemployed; 2) women constituted nearly 50% of the educated unemployed; 3) about 51% sought jobs of typists; 4) salary expectation of most of the job seekers was very low and that of females was even lower; 5) about 25% of the job seekers were migrants from other States; 6) higher grade occupations, higher level of education and long distance origin of the employment seekers seem to be the relative factors encouraging higher mobility in the labour market; 7) pronounced scarcity of skilled manpower existed in some occupations. The major problems and policy implications have been examined in chapter 6, and in the light of the findings, the prospects and guidelines for a future policy have been suggested in chapter 7. Chapter 8 gives a summary of the recommendations.

237 **PADMANABHAN C B:** Economic considerations in planning education in developing countries. NIE Journal 1968, 2(6), 60-2.

Investment in education should be guided by cost benefit analysis which would result in clarifying the benefits arising from education along with the cost necessary for their realization. Techniques of economic planning can also be used in educational planning. Two steps involved in such planning are: 1) determination of the size of the educational sector. The relevant economic considerations at this stage are related to the limitations of expansion of education and the requirement of a minimum amount of education for the development of the economy; 2) appropriate division of efforts between levels and types of education, employing the techniques of economic planning. Allocation of resources for education under social services resulted in the dilution of quality when funds for social services were reduced. Adaptation of the techniques of educational planning which involves precise formulation of objectives would increase the effectiveness of education. For the developing economies, educational planning should be more closely related to the programmes of agricultural and industrial development.

238 **RAMAMOORTHY B:** Educational planning and economic development. Economic Affairs 1968, 13(1-2), 72-8.

Educational planning should provide for a balanced development of all the levels and types of education and training for adults as well as children, in schools and out of schools. It should be concerned with both quantitative expansion and qualitative improvement by introducing reforms and innovations. An educational plan should be more than the elaboration on paper of future targets which bear little relation to what happens in schools and universities or to the process by which policies are formed, budgetary decisions taken and resourcs allocated. It should be capable of being translated into action. The plan should be a continu the diagnosis of present conditions and the assessment of future needs to the formal approval of such plans, their practical implementation, the evaluation of results, and the revision and formulation of subsequent plans in the light of previous experience.

239 SAPRA C L: Decentralized planning for educational development - a rationale. NIE Journal 1968, 2(6), 40-3.

The system of decentralized planning with the State as the planning unit led to the neglect of local needs and local conditions of different districts and consequently failed to correct inter-area imbalances in educational development. Decentralized planning at the district level would on the other hand: 1) improve the process of plan formation for educational development; 2) minimize the inter-area disparities in the provision of educational facilities and 3) improve effectiveness of plan implementation and thus quicken the pace of educational development. An analysis of the factors (demographic, economic, social and physical) involved in educational planning supports the above contention.

240 SARKAR S C: Education and unemployment in India. Searchlight 6 December 1968, p.4, Cols. 3-6; p.5, Col.8; 7 December 1968, p.4, Cols. 4-6; p.5, Col. 6; Magazine Section 15 December 1968, p.I, Cols. 1-6. p.II, Cols. 1-2. 17 ref. 9188 words.

Although the actual sequence of interaction between employment and education is not precisely known, the fact that education creates employment opportunities cannot be doubted. The requirement of education, however, had varied through the ages with the variation in the type of employment. In this context, the elitist approach of restricting the spread of education at different levels has been deprecated. As pointed out in the Census of India Paper No. 1(1962), the failure of primary education was largely due to the shortage of teachers caused by lack of provison of enrolment in colleges and universities. Attention has been drawn to the tremendous expansion of education in U.S.S.R. resulting in over-all technological and economic advancement. Referring to the opinions of some well-known economists that education is the most important factor in economic development, it has been urged that the country should immediately launch upon a comprehensive programme for the expansion of education in the country for a faster economic development and growth of employment opportunities. The following suggestions have been made in this connection: 1) sectarian schools like those managed by religious groups, and public schools managed by private finance, which cater to the needs of the rich people only, should be abolished. The existing pattern of basic education needs change, since for all practical purposes, the system works for the perpetuation of the backwardness of villagers. If Hindi is genuinely desired to be the medium of official and inter-State communication, it should be made a subject of study in all schools throughout the country.

241 SHARMA R C. Planning school improvement - some theoretical issues. NIE Journal 1968, 2(6), 16-21.

The failure of many educational programmes and projects has been attributed to the confrontation among different power groups and the power conflicts between change agent (experts possessing professional and academic authority) and clients (officials possessing bureaucratic authority to make decisions for schools). The way the different groups influence various school improvement programmes has been schematically presented. The various forces are: 1) social and cultural ethos; 2) policy makers, including Advisory Board of Education, legislatures, local boards; 3) external power comprising political power, professional power, academic power, collective power exercised by teacher organizations and student unions, and social power exercised by social and religious organizations; 4) internal power comprising bureaucratic power exercised by educational administrators, and professional power exercised by the State Institutes of Education and other departments concerning research, training and extension. Thus external power is exercised by autonomous institutions and internal power by those under the control of the State departments of education. The nature of confrontation among power agencies, and power conflicts between change agent and client have been described. The role of change agent in effecting school improvement programme has been stressed and it has been pointed out that the failure of an improvement programme is mainly due to his inadequacy and not the inadequacy of his client.

242 Technical manpower [Editorial]: Economic Times 23 November 1968, p.7, Cols. 1-2. 560 words.

Declining employment opportunities for trained personnel due to lack of demand for their services contribute to brain drain from India. An analysis of the vacancies in different organizations reveals that while there is a demand for one category of technical personnel, no such demand exists for other categories. The surplus of mining engineers and shortage of ship designers are cases in point. These imbalances have two reasons: 1) technical manpower planning was made on an ad hoc basis; and 2) no discipline-wise planning was ever attempted. It has been appreciated that the Union Ministry of Labour and Employment has collected adequate data on the requirement of scientific and technical personnel, for use in manpower planning during the Fourth Five Year Plan. Closer contact between technical training schemes and the employment market has been suggested for adequate utilization of technical manpower on a national basis.

243 THAKKAR N G: Planning the total school programme - an experiment in a labour area. NIE Journal 1968, 2(6), 56-9.

Describes an experiment being conducted by the Saraswati Vidya Mandal, Ahmedabad in planning the total school programme in a labour area where most of the students belong to poor families of uneducated parents. In March every year, all teachers are given evaluation forms to evaluate the school programme in toto. In the beginning of April, an Action Research Workshop is held, where selected teachers scrutinize the evaluation forms and make recommendations to the general session. In the light of these suggestions they define the line of action for the Planning Workshop which is held to plan out the total school programme for the next year. The total school programme consists of: 1) teaching various subjects as per syllabus prescribed by the Education Department; 2) evaluating the achievements of pupils; 3) organizing various co-curricular activities; 4) imparting educational, social and vocational guidance; 5) promoting human relationships - teacher-pupil, pupil-pupil, parent-teacher etc. Every year, for three days during the summer vacation, just before the school reopens, a Re-orientation Workshop is held, where the older teachers explain to the newcomers the various details of the programme - curricular as well as co-curricular. The success of students in the S.S.C. examinations as well as in the competitive examinations reveals the significant impact of planning the total school programme.

244 TOBIAS G: Educational planning for human resources development in the Fourth Plan. Manpower Journal 1968, 4(2), 32-54.

Three factors of educational planning - pedagogical, structural, and economic - have been discussed. Pedagogical planning should aim at improving the relationship of the student to the school. The main problems involved are: 1) accommodating children from widely diversified background into a common school; 2) utilizing primary education as the main tool for the amalgamation of diversified linguistic, cultural, religious and traditional factors; and 3) spending a considerable share of the educational budget for multiple-language teaching (three-language formula). The structural planning should improve the relationship between a given school and a given level of education to the rest of the educational system including that which precedes and that which follows each given level. Economic planning should ensure that the products of the educational system are most effectively and usefully absorbed in the economy. Three factors need careful consideration: 1) whether universal literacy among cultivators is an indispensable precondition of modernizing agriculture and increasing productivity; 2) whether manpower and educational planning should concentrate exclusively on long-range forecasting; 3) whether general education should be substituted by undifferentiated vocational education, without ascertaining their demand in the labour market.

245 VENKATARAMANA BHAT P: Unemployment among new engineering graduates and diploma holders - a paper prepared for the symposium and discussion at the Annual Conference of the Association of Principals of Technical Institutions (India) from 27th to 29th May, 1968 at Mysore. Journal of the Association of Principals of Technical Institutions (India) 1968, 21(1-2), 40-3.

Suggestions for solving the unemployment problem are: 1) slow implementation of the policy of retrenchment on completion of different projects in the public sector, and gradual absorption of experienced engineers in other development schemes; 2) building a reserve cadre of engineers for employing them in future Plan projects. Lack of such preparation retarded the industrial progress during the three Plans; 3) engaging engineers in investigating new projects, preparing project reports, alternate designs etc; 4) persuading major engineering contractors to employ qualified engineers; 5) employing qualified engineers in municipalities and panchayats; 6) persuading industries to employ and train more engineers; 7) providing necessary credit facilities by the State and the banks to qualified engineers to take up contracts; 8) diversifying courses in technical institutions; 9) reducing the incidence of labour unrest to ensure increased production, thus widening employment opportunities; 10) relaxation of certain restrictions and controls on starting new industries so that production in the private sector may increase.

SCHOLARSHIPS

246 INDIA. MINISTRY OF EDUCATION: Scholarships for study abroad and at home. Delhi, Manager of Publications, 1968. x, 172p.

The book is in four parts: 1) scholarships/fellowships offered by foreign governments/organizations. Thirtyfour countries offer scholarships to Indian nationals; 2) scholarships for studies at home for Indian nationals by different Ministries; 3) scholarships offered by the Ministry of Education for foreign students for studies/training in India; 4) scholarships offered by the Ministries of Defence and Education for study in schools for Indian nationals. For each item the following details are given: 1) number and value of scholarships, duration, subjects of study, qualifications, and age. Four appendices contain the following information: 1) statement showing the details of various courses of study or training facilities which can be arranged during 1967-68; 2) specimen application form of National Loan Scholarship Scheme; 3) number of scholarships granted by Central Government (Ministry of Education), Provincial Trusts etc. tenable at the Indian School of Mines, Dhanbad; 4) statement showing the allocation of scholarships for the year 1967-68 to different countries covered under the General Cultural Scholarships Scheme.

SCIENTIFIC RESEARCH

247 INTER-UNIVERSITY BOARD OF INDIA AND CEYLON, NEW DELHI: Research in progress - a record of subjects taken up for research by scholars registered for doctoral degrees with Indian universities during 1958-66. V.2. Biological sciences. New Delhi, the Board, 1968. xv,357p.

Lists 1,576 research projects arranged by Decimal Classification Scheme. Each entry includes detailed particulars about the project in the following order: 1) name of the scholar; 2) title of the thesis; 3) name of the university, department/institute where research is being conducted; 4) date of commencement of research; 5) probable date of completion; 6) name and designation of the guide; 7) brief resume of the research topic; and 8) reference to published documents related to the project. There are alphabetical indexes to the subjects and the research workers.

SOCIAL EDUCATION

248 BUTT H W: Designing in-service training programmes for extension workers. Social Action 1968, 18(5), 382-9.

Since the extension methods differ with each subject, the trainees should be divided into homogeneous groups like agricultural extension officers and animal husbandry extension officers. The syllabus should be able to meet the wide range of difference in age and experience among the participants. Each participant should be asked to describe his experience in applying extension methods and the syllabus should be finalized on the basis of the suggestions offered by the participants. The major portion of the training period should be devoted to presenting the latest results of research on the subject. The five major stages of training are: 1) providing the theoretical framework which consists of areas covering extension methods, individual, group and mass approach, demonstrations, programme planning and evaluations 2) selection of specific topics that would provide the necessary material for the development of skills, and actual demonstration of the techniques and skills by the trainers; 3) preparation of method demonstration plans and presentation of various topics through demonstrations on the campus by the trainees; 4) training for about a week in the application of theoretical knowledge in real village conditions; 5) analysis of the mode of performance of each assignment and the reaction of the trainees. Guidance and counselling should be given at every stage.

249 NAYAR D P: C.D. lacks firm educational basis. Kurukshetra 1968, 17(2), 14-16.

The causes of the failure of educational projects of the Community Development (C.D) Programme have been discussed. Mobilizing the community resources to bring a momentum of its own followed by state aid in progressively increasing amounts would have been a better strategy than concentrating state aid during the project stage followed by slender aid in the subsequent stage. No effort was made to increase training facilities for the social education organizer (SEO) in effective techniques of community organization. The content and role of social education were also not very clear. Confusion prevailed in regard to the relation of the SEOs vis-a-vis the project team and the State Education Department. The essentially urban background of SEOs is a great handicap in working in rural areas. Two alternatives have been suggested for the recruitment and training of SEOs: 1) selection from among the intelligent village-level workers and making up the deficiency of general education through an intensive in-service training course; 2) recruitment of villagers with low educational qualifications and providing professional training through prolonged and intensive training.

SOCIAL SERVICE

250 INDIA. MINISTRY OF EDUCATION. EVALUATION TEAM ON THE LABOUR AND SOCIAL SERVICE CAMPS (1963). Report. Delhi, the Ministry, 1968. V, 60p.

The scheme of Labour and Social Service Camps was initiated in

1954-55 by the Government of India as a part of the youth welfare programme. Students in manageable numbers are, on a voluntary basis, taken to camps in villages for rendering manual labour in the execution of ameliorative works useful to the community. The Team was set up to examine the following aspects of the scheme: 1) effect of the camps; 2) educational values of the camps; 3) reaction of villagers; 4) physical achievement; 5) follow-up work. The team found the scheme useful in meeting some gaps in the educational programme and recommended its further expansion. Some suggestions for its improvement are: 1) drawing up a standard syllabus of training for camp organizers (suggested syllabus given in appendix F); 2) dividing larger camps into a number of smaller camps to derive maximum educational value; 3) reducing the manual workload for the age group 13-16; 4) organizing camps only during vacations; 5) locating camps in different villages instead of concentrating in the same village; 6) organizing camps by educational institutions or a voluntary agency having the necessary experience and competence; 7) involving non-students from the community in the camps. The genesis and development of the scheme have been described in the first chapter. Appendices include the following: rules and regulations for holding camps, and analysis of data regarding the camps.

SPECIAL EDUCATION

251 BAPAT N V: Residential schools in tribal areas. Vanyajati 1968, 16(4), 154-9.

Residential schools (= Ashram schools) have considerably reduced the wastage at the middle and high school levels. An analysis of the pattern of residential schools in Orissa, Maharashtra, Gujarat and Madhya Pradesh and also the schools run by Christian missionaries shows that their patterns differ widely. Some significant characteristics of the schools are: 1) truancy is common in schools maintained by Government; 2) the percentage of wastage and stagnation is very low in schools run by voluntary agencies; 3) in Maharashtra and Gujarat, residential schools are mostly managed by voluntary organizations and are co-educational with separate residential arrangements for boys and girls. The schools lay stress on two crafts viz., agriculture, and spinning and weaving. The insistence on a vegetarian diet in Maharashtra and Gujarat is often misunderstood by tribal people; 4) residential schools in Orissa are run on the pattern of ancient Gurukula system (centres of learning where children are placed under the care of teachers residing in the hermitage). Three suggestions have been made: 1) introduction of science and English as compulsory subjects in schools to facilitate the admission of tribal children in higher secondary schools; 2) upgrading of some residential schools to higher secondary level; 3) encouraging voluntary agencies to open more residential schools.

252 Education for backward children [Editorial]. Hindu 6 November 1968, p.6, Cols. 2-3. 430 words.

According to an estimate made by the Federation of the Mentally Retarded, out of the total of about 6 million backward children only 1500 receive special education. Indian schools are thus burdened with a higher percentage of mentally retarded pupils who should have been taught in special schools or classes. It is necessary to deal with this problem immediately in order to improve the general efficiency of schools. A distinction should be made between different categories of backward children e.g. extreme cases of mental deficients, backward children with IQ below 75, physically handicapped children, and underachievers possessing normal intelligence. The major problem concerns children who are born with a lower level of intelligence. Shortage of qualified teachers and selection of the right type of curriculum are the main handicaps in launching any programme of education for them. The absence of any effort to identify such children and provide them with the appropriate training has been regretted.

253 INDIA. COMMISSIONER FOR SCHEDULED CASTES AND SCHEDULED TRIBES: Educational development (In his Handbook on scheduled castes and scheduled tribes. Delhi, Manager of Publications, 1968. 94-107).

The development of education of scheduled castes and scheduled tribes before and after the introduction of the Constitution has been discussed. Relevant extracts from the census report of 1931 and the report of the Auxiliary Committee appointed in 1929 by the Indian Statutory Commission (Simon Commission) have been quoted to give some idea about the state of affairs before independence. The extent of progress since independence would be evident from the fact that expenditure on educational programmes for these communities rose from Rs.10.98 crores in the First Plan to 46.20 crores during the Third Plan. The programmes include establishment of Ashram schools, technical and vocational schools, award of scholarships, hostel facilities, provision for stipends, books, stationery grants, boarding grants, mid-day meals, clothing. The literacy rate among scheduled castes and scheduled tribes rose from 1.9% and 0.7% in 1931 to 10.27% and 8.54% respectively in 1961. From a total of 114 postmatric scholarships in 1944-45 for scheduled castes, the number rose to 89,907 in 1966-67. Similarly, the number of scholarships for scheduled tribes rose from 84 in 1948-49 to 17,650 in 1966-67. The number of scholarships for overseas studies also registered a significant growth. The appendix gives the literacy rate (1961) and year-wise progress of the post-matric scholarship scheme since 1944-45.

254 KUNDU C L: Education of scheduled tribes. Social Welfare 1968, 15(7), 10-11.

Some salient features of the primary level syllabus for tribal schools developed by the author and successfully introduced in a school of Udaipur: 1) First stage - general and social studies i.e. human needs for food, clothing and shelter; word building and sentence construction based on terms familiar to children; simple tales, reading materials about food, home life and tribal life; nature study with special reference to food plants; counting and use of simple arithmetical rules, drawing. 2) Second stage - origin of domestication of plants; nature study on the basis of detailed observations of germination, growth, maturity of food plants, and effects of seasons; history of places of interest in the neighbourhood; addition, subtraction, multiplication and division; location of tribal areas on maps. 3) Third stage - importance of irrigation for cultivation; nature study in relation to crops, different modes of cultivation and manuring; life of the scheduled tribes of the State; study of the nearest important trade centre, railway station, rivers etc. 4) Fourth stage - domestication of cattle; ancient areas of cultivation, their people and culture; knowledge about India as a whole and some important countries. The actual classroom teaching should be related to practical work and emphasis should be on craft. Tribal games , archery and tribal music should also be included in the curriculum.

255 MEHDI B: Educating our academically superior children. Rajasthan Board Journal of Education 1968, 4(3), 10-13.

The need for developing an enriched curriculum in India to suit the intellectual needs of the gifted has been stressed. Enriched curriculum implies studies, activities, and courses intended to increase the learning experiences. The basic ideas underlying the preparation of curriculum for academically superior pupils are: 1) planning and development of reading materials and activities which would develop independence, originality and a desire for creative expression in children; 2) planning of intellectually stimulating and challenging activities, 3) development of materials to stimulate critical thinking. The pre-requisite for developing differentiated programme for the gifted are: 1) willingness on the part of all concerned to co-operate with the programme; 2) thorough knowledge about the needs of academically superior pupils; 3) provision of necessary resources for implementating the enriched programme; 4) selection of suitable teachers interested in teaching the gifted; 5) programme design and operation involving in-service training of a group of dedicated and qualified teachers, curriculum construction, lesson plan try-outs, and modification of curriculum units on the basis of actual experience.

256 MEHTA C S: Educating gifted children. Rajasthan Board Journal of Education 1968, 4(4), 28-33.

The need for identifying gifted children through the administration of different types of tests has been analyzed. This should be followed by motivating children to learn at the level of their capabilities. The role of suitable teachers in this context has been stressed. Of the three systems of educating the gifted (acceleration, enrichment, and special classes), the programme of enrichment in the regular classroom has been advocated in India. However, the ultimate aim would be to introduce special classes for the gifted. Special provision for the gifted is as much democratic as opportunities now afforded to the children of average and low ability.

257 SAREN V: Education of gifted children in India. Journal of Education and Psychology 1968, 26(3), 178-81.

In consideration of the rapid growth of population in India a realistic approach to educational development would be the provision of special education for the gifted along with all-out efforts to raise the quality of education for all. Special attention to the gifted would not be undemocratic and unsocialistic if the procedure for identifying the gifted is not biased in favour of socio-economically stronger sections. The curriculum for the gifted should consist of enriched curriculum in respect of the areas of their special talent and the usual curriculum. The gifted children should be trained to realize their responsibilities as future citizens. A special system of examination, largely or wholly internal, should be evolved. Establishment of special institutions covering classes VI onwards under the administrative control of the State Education Departments has been suggested.

258 VYAS N N: Problems of tribal educational development in Rajasthan. Tribe 1967, 4(1), 63-9.

The major problem of the development of tribal education in Rajasthan is the non-utilization of available opportunities by tribal people. The value of scholarships is not attractive enough to induce tribal people to send their children to schools instead of engaging them in economic occupations. Social and economic factors also cause large-scale drop-out. Widely scattered schools in rural areas explain the under-enrolment. Although it is advisable to train tribal children in traditional crafts and family vocations, shortage of suitable teachers acts as a hindrance to implement such programmes. It has been suggested that teachers for tribal schools should preferably be slected from tribal people and trained in tribal culture by the Tribal Research Institute of the State.

STATISTICS

259 INDIA. MINISTRY OF EDUCATION: Education in India 1963-64. Vol. 2. All-India tables. Delhi, Manager of Publications, 1968. 161p.

The following statistical data are provided: 1) general summary of institutions, pupils, teachers, and expenditure on education; 2) institutions by type and management; 3) distribution of pupils in institutions for boys and girls; 4) expenditure on institutions for boys and girls; 5) distribution of pupils receiving general, professional and special education by classes and age groups; 6) teachers in schools for general, vocational and special education; 7) examination results; 8) compulsory primary education; 9) education in rural areas; 10) scholarships, stipends, free-studentships and other financial concessions; 11) social (adult) education; 12) libraries for adults; 13) statistics of the handicapped - institutions, teachers, pupils, and expenditure; 14) statistics of education of scheduled castes, scheduled tribes and other backward classes - institutions and expenditure, pupils, scholarships and other financial concessions; 15) study abroad; 16) State educational service.

STUDENT INDISCIPLINE

260 Anatomy of student agitation. Hindu 17 November 1968, p.8, Cols. 4-8; Impact of mileu on student behaviour ibid 18 November 1968, p.6, Cols. 4-8; Political affiliation of student leadership ibid 19 November 1968, p.6, Cols. 6-8. 4400 words.

An analysis has been made of the causes of student agitations in Madras city on the basis of a survey. The disorganized and fragmented student activism is not aimed at any structural change but is designed to seek redressal of temporary grievances. Although the activism has some of the manifestations of radicalism, e.g. acute economic frustration, contempt for petty rules, self-righteousness, a sense of outrage, it lacks any large political aim and the necessary organizing competence and the vision to transform these into a successful revolutionary movement. Instead of a frontal attack on basic economic and social institutions, all kinds of inferior authority and symbols like the principal of a college, bus conductor, policeman become their target. Some significant points revealed in the study are: 1) agitations occur less frequently in colleges having better educational and physical facilities; 2) students of the humanities and the social sciences are more involved in agitations; 3) student activism tends to increase on the eve of examinations. Some of the causes of unrest identified are: 1) corruption in academic institutions; 2) rivalries in student unions caused by personal ambitions and political predilection; 3) poverty of the new generation of students.

261 DHAR B N: Dilemma of youth. Social Welfare 1968, 15(9), 11-12.

The following causes contribute to the wave of unrest among modern youth: 1) deterioration in moral fibre and ethical standards; 2) disintegration of the joint family; 3) weakening of parental authority; 4) absence of clearly defined goals for young people; 5) decay of religious influence in everyday life; 6) uncertain future of the youth; 7) hiatus between what is preached in public and what is practised in private by the elite; 8) deterioration in living standard; 9) generation gap; and 10) general impoverishment of the urban middle class. Suggested remedial measures include involvement of students in extra-curricular activities, games and sports and social service, restriction of admission to higher education, provision for vocational guidance. Apart from the economic factors, the social and psychological factors are relatively more important in devising ways and means of ensuring smooth adjustments of young people with the changing environment.

262 GANGOPADHYAYA D L: Chātra bikṣov o biśṛṅkhalatā (bṛhattara kalikātār uchchatara mādhyamik vidyālayer chātra samājeṙ śṛṅkhalāhīnatār manastātvik kāraṇa biśleṣaṇ - ektī samīkṣā). (= Student unrest and indiscipline - an analysis of the indiscipline among the students of higher secondary schools in Greater Calcutta - a survey) [Bengali]. Mānabman 1968, 7(4), 302-6.

A sample of 2850 students studying in 32 secondary schools in West Bengal was divided into two groups (disciplined and indisciplined) and subjected to aptitude and personnel tests. Significant differences were noticed between the groups in the results of the tests and their family backgrounds like size of family, number of earning members in the family, income of the family, number of brothers and sisters, and educational levels of parents. Big family, financial difficulties, lack of affection, and unfavourable school environment are some of the causes leading to student indiscipline. Students belonging to science and technical streams were less indisciplined than their counterparts in other streams.

263 MUKHERJEE S N: Factors influencing student indiscipline. Christian Education 1968, 18(4), 30-4.

Some of the factors influencing student indiscipline are: 1) absence of moral and religious instruction in schools; 2) problem of unemployment; 3) exploitation of students by politicians; 4) absence of healthy home environment; 5) lack of personal contact between the teacher and the taught; 6) delay in redressing student grievances; 7) poor economic condition of teachers. The suggested steps to arrest student unrest are: 1) realistic approach in formulating educational policy; 2) organizing a students' welfare committee in every educational institution; 3) holding a conference of representatives of government, political parties, guardians and students' organizations to evolve a suitable formula for the smooth functioning of educational institutions; 4) improving the financial status of teachers.

264 ROY S N: Psychodynamics of indiscipline. Prajnan 1968, 2(2-3), 18-22.

The problem of indiscipline primarily involves psychological, rather than socio-economic and political factors. Some of the conditions under which the attitude of indiscipline develops, whether at home or at school, are: 1) parental discord; 2) difference between the precept and practice displayed by leaders of the society; 3) attitude of over-indulgence or over-strictness towards the child's expression of his spontaneous and natural desires and needs; 4) indifference or inadequate attention to his quer 5) efforts to make child look small by comparing him with others, instead of adopting corrective measures; 6) imposing social, moral or ethical restrictions which are not consonant with the child's way of thinking or his receptivity; 7) assigning inadequate importance to punctuality, self-reliance, and sense of duty. The stronger the grounding in discipline, the more remote is the possibility of getting a grievance redressed through acts of indiscipline in spite of adverse political, economic, and social surroundings. Guidance and counselling services should be provided by universities to enable the students to utilize their abilities in the best possible way, and to overcome emotional maladjustments.

265 SRINIVAS M N: Our angry young men - troubled social background. Times of India 22 November 1968, p.10, Cols. 3-5, p.15, Col. 3. 2120 words.

The causes of student unrest are: 1) changed social composition of the student population; 2) political rivalries and influence of political parties on campuses; 3) the gulf between rural school atmosphere and urban university life; 4) the gap between educated rural youth and uneducated rural parents; 5) growth of private educational institutions managed by persons with vested interests; 6) teachers' interest in money-making and academic politics. The suggestions are: 1) a continuous dialogue between politicians and academic men as to the measures to be adopted; 2) making higher education a concurrent subject, at least until the conditions in colleges and universities are improved; 3) continuous review of the present and future problems of the youth.

STUDENT POLITICS

266 ALTBACH P G: Student politics in Bombay. Bombay, Asia Publishing House, 1968. ix, 218p. (University of Michigan, Indian Education ser., 3).

The publication is a historical and sociological case study of the development of students' political activism in the city of Bombay from its beginning in the late 19th century up to the present time. The focus of the study is on student activity, and aspects of student life, and of society which might have a bearing on student organizations and movements. In the two introductory chapters the Indian student movement has been linked to student activism and unrest around the world and a description has been given of the student community and its environment. Chapter 3 traces the development of student movement during the period 1850-1933. The development of student movement had been viewed in the context of political events. The organizational pattern of the movement during the period thus reflects broader trends in Indian politics. Chapter 4 describes the politicization of the student movement during the period 1935-1942. The integral relationship between political organizations and the student movement during this period was marked. Student interest in educational issues was very limited. The fifth chapter describes the important role played by students in the 1942 movement (Quit India Movement) - the apex of India's political struggle against British. The 1942 movement showed student organizations at the high level of their value-oriented period. Campus and other educational issues were totally subordinated to political affairs. The sixth chapter describes student movement on the eve of independence (1943-1947). With the loss of momentum of the nationalist movement after 1942, the student movement also declined during the period. The seventh chapter relates student movement since independence. It has been observed that student movement in Bombay had been destroyed by the trend of political life in India, and by the attitude of both educators and government officials who had attempted to stifle the organization of independent student associations. Three case studies have been presented in the concluding chapters: 1) communal students' associations - the Muslims as a case study; 2) students' press in India 1930-1965; and 3) transition of the Bombay student movement.

267 INDIA. VICE-PRESIDENT, 1967- . (V V GIRI): Active politics not for universities - norms for teachers and students. Mail 3 December 1968, p.8, Cols. 4-6. 1180 words.

Given the necessary facilities and congenial academic environments, the students in active collaboration with teachers, can be a national assest. To achieve these objectives, active politics in universities should be discouraged. Although the students have every right to follow academically the different political ideas, they should not take active part in politics. Politicians should also preserve the autonomy of the universities and should not make use of students to achieve political objectives. The special role of teachers in this matter has been stressed. Because of the nature of their duties, they should not join any political party and should prevent the inroads of controversial politics into university life.

STUDENT UNION

268 CHAUDHARY B: How students' unions can work for social welfare. Social Welfare 1968, 15(9), 15, 24.

Student unions are more interested in power politics than the welfare of the student community. The scope of student unions should be limited to the welfare of students, society, and of the nation. Students who are immune to political activities and interested in social work should be associated with the union. The term 'union' should be replaced by terms like 'society' or 'association'. Instead of wasting time in discussing whether students should participate in politics, the union should organize seminars on topics like family planning, save-food campaign, social evils, importance of democracy in India, and should play an active role in translating into action the suggestions put forward in such seminars. A wide range of social welfare activities for the union has been suggested, which include raising student welfare funds and utilizing vacations for serving the community. Government should pay for the labour put in by students in such activities.

269 Role of students' union [Editorial]: Educational India 1968, 35(3), 93-5.

A great deal of tension between the student community and the authorities of educational institution can be reduced if the role of the student union is clearly defined on the basis of the division of student activities in colleges. Student activities can be divided into two categories - compulsory, and voluntary or optional. Classroom activities and related activities like library work, assignment, examinations, and tests fall in the first category. Extra-curricular activities like debates and discussions, essay competitions, social service, sports and games constitute the optional category. Student unions should serve as the agency for organizing the optional activities and full freedom should be given to pursue them. In case of a conflict between compulsory and optional activities, it should be recognized that priority should be given to the former. The suggestion of the Union Education Minister to allow student representation on university bodies has been criticized. Even if such provision is made, the scope should be clearly defined.

TEACHER ORGANIZATION

270 AURORA G S: Teachers as a professional group. Social Action 1968, 18(3), 215-23.

The study is based on the data available in the publication: Status of teachers in India prepared by World Confederation of Organizations of the Teaching Profession [see Indian Educational Material, Vol. 2 Abstract No. 143]. The following conclusions have been drawn: 1) in their relations with the society at large the teacher organizations attempt to perform two types of related functions, viz. projecting the image of teachers as a 'profession' and projecting the economic demands of teachers; 2) in their relations with their own members the organizations try to encourage self-expression by providing such forums as meetings, seminars and publishing journals. They also try to encourage among them the qualities which are consistent with professional status. Under some conditions, however, they may encourage militant tendencies which are necessary for the protection of the economic standards of their members; 3) in relation to various segments of society with which the teachers are directly concerned, the teacher organizations do not pay sufficient attention. This is indicative of the following facts: (a) the immaturity of the teachers as a professional group, (b) great social diversity within the group, and (c) economic insecurity producing the symptoms of self-centredness.

TEACHER EDUCATION

271 BHAVANI RAO B: Innovations in the field of teacher training. Teacher Education 1968, 3(1), 26-7.

The innovations introduced in the B.Ed. course of the Mysore University are: 1) reducing the number of theory papers from six to five (educational theory and practices, educational psychology, historical development of education in India and school association, and two papers on teaching of two secondary school subjects). An additional paper (not for examination) has been introduced which would enable the candidates to work as career master, member of the board of examiners, textbook writers etc. Assessment of practice teaching would be based on lesson supervision, criticism lesson, lesson notes, observation records, teaching aids prepared by students, effective participation in a citizenship camp, and special practical work of a sessional nature on topics like critical study of a textbook, critical analysis of an examination question paper, preparation of remedial teaching plans. Both for theory and practice teaching, internal and external assessments would be introduced. The correlation between internal and external assessment and correlation between achievements in theory and practice would be statistically worked out.

272 GUPTA L D: Case for in-service education. Haryana Journal of Education 1968. 1(4), 56-60.

In-service education should be provided at least in three areas: 1) orientation courses for new headmasters/principals; 2) content courses for teachers to enable them to keep in touch with new developments in different subject fields; and 3) demonstration lessons. The role of teacher education colleges in this matter has been stressed. Even if the college does not have an extension services department it should undertake the following programmes: 1) organizing in-service education for teachers of neighbouring schools; 2) encouraging teachers of neighbouring school to use the resources of the college; 3) adopting some schools and developing them as experimental schools; 4) maintaining contact with the alumni and helping them to keep in touch with modern developments in teacher education; 5) assisting the supervisory staff in organizing in-service training.

273 JAIN S L: Why have training colleges failed? Educational India 1968, 35(6), 190-2.

The failure of the teacher education programme has been attributed to the following causes: 1) more importance given to the methods of teaching rather than the knowledge of the subject content; 2) selection of wrong type of teacher educators; 3) heads of institutions lacking qualities of challenging leadership; 4) obsolete syllabus; 5) dual control of universities and State Education Departments; 5) Faulty method of student selection; 6) ineffective supervision of colleges by universities; 7) inadequate attention paid to practice teaching. The teacher education programme need not be full-time. Theoretical instruction provided during two summer vacations, and a programme of fifteen-day practice-teaching would serve the purpose.

274 KRISHNA KANT: Developing pupil-teachers' personality through tutorials - a suggested programme. Teacher Education 1968, 3(1), 31-4; Educational Forum 1968, 13(4), 28-33.

The suggested programme of tutorials should have the following objectives: 1) helping student teachers to solve their personal problems; 2) developing their academic, aesthetic, cultural and literary interests; 3) developing their power of verbal and written expression, initiative and imagination, ability to organize curricular and co-curricular activities, and tolerance for cultural and intellectual differences. The steps involved in the programme are: 1) collection of personal data (a proforma questionnaire containing 25 items is given); 2) classification of the data under the following headings: (a) environment, (b) educational status of parents, (c) qualities of favourite teachers, (d) interest in literary activities,

(e) interest in cultural activities, (f) attitude towards elders, children, and friends; (g) leisure time activities, (h) hobbies, (i) emotional equipment, and (j) future professional aspirations; 3) formation of groups in accordance with the interests of student teachers in literary and cultural activities, and aspirations; 4) involving the groups in four types of activities: literary activities, cultural activities, leisure time activities, and other activities like seminar-reading, visits to good schools and meeting teachers, case studies of problem children and problem teachers, and preparing booklets and other display material.

275 MATHUR A: Study circle for English teaching. Teaching 1968, 41(1), 13-18.

Organizing study circles, the most economical form of in-service training, has been suggested to keep teachers informed of the changing shift in the objectives of English teaching in India, and for improving teaching techniques. Such study circles could be organized at different levels - local, state and national. The programme should include the following activities: 1) talks by experts followed by discussions in which teachers participate; 2) organizing demonstration lessons; 3) planning of teaching programme; 4) talks and demonstrations on the use and preparation of teaching aids;5) publication of newsletters containing important research findings and new material of various kinds; 6) seeking the cooperation of agencies like British Council, Regional Colleges of Education in organizing the study circle. The activities of the study circle should be evaluated through questionnaires for their relevance, utility, practicability, and effectiveness.

276 PADHYA L M: Examination reform in teacher education programme - semester system and continuous internal assessment. Journal of Education and Psychology 1968, 26(3), 208-9.

The Faculty of Education and Psychology, Sardar Patel University had decided to abolish periodical examinations in theory and practice teaching, and to replace them by a system of continuous internal assessment. Performance in classroom tests, term papers, assignments, seminars and discussions, and paper reading would be taken into consideration in grading the achievement of students during a semester, using an eleven-point scale. In the first semester, the practice teaching programme would include general introduction through four demonstration lessons in different subject areas for one week to acquaint the student teachers with the general methodology of teaching, demonstration lessons by method master in different subject areas using different techniques for one week, and block practice (practice teaching programme of about 2-3 weeks in the school). In the second semester the 'block practice' programme would be further intensified. Besides, the student teachers would be required to take part in curricular and co-curricular activities.

277 RAY L: Underachievement in teacher education. NIE Journal 1968, 3(1), 19-22.

Statistical data relating to the results of B.T. examination of five teacher education colleges in Calcutta show that while many ordinary graduate students showed better performance in the examination, about 20-30% of the postgraduate degree holders were unsuccessful. The main causes of underachievement are: 1) heavy and unattractive syllabus - maximum failures were in 'history of education', followed by 'educational psychology' and 'methods of teaching'. While a teacher of average calibre deputed from a school could not pass in the 'contents and methods of teaching', the graduates (honours) and postgraduate degree holders found the subjects 'history of education' and 'educational psychology' difficult to comprehend; 2) wrong choice of teching methods; 3) economic conditions and poor health of students; 4) lack of proper attitude towards the profession. The attitude of the State Government which is more interested in the quantitative rather than qualitative aspect of teachers, the traditional system of examination, and the frustrating attitude of teacher educators have been criticized.

278 SHARDA DEVI: New strategy in teacher education - in-service education of teacher educators - a critical thinking. Teacher Education 1968, 3(1), 8-11.

Suggests a critical evaluation of different programmes of in-service education in terms of changes effected in trainees and in relation to previous practices. No new programmes should be introduced without considering the following points: 1) ascertaining the need for such a programme; 2) determining the quality of persons to be trained; 3) giving adequate publicity to the programme; 4) selecting candidates jointly by the sponsoring and feeding agencies; 5) making the training voluntary for teacher educators; 6) involving the resource personnel at every stage of the programme, from the planning to the follow-up stage; 7) evolving a scientific follow-up programme as an essential part of the in-service programme; 8) repeating the course only after ascertaining its need. Other suggestions are: 1) a professor or a senior reader should act as guide for newly appointed teacher educators;

2) all training colleges in an area should form a staff forum for discussing various research projects; and 3) introduction of programmes like exchange of senior professors, and visiting fellowships for younger teachers.

279 TRIVEDI R S: Teacher education programme - viewed and reviewed. Teacher Education 1968, 3(1), 19-23.

Describes the innovation introduced in the pre-service and in-service programmes of the M.B. Patel College of Education Vallabh Vidyanagar (Gujarat). A. Pre-service programme - 1) encouraging discussion method to cover the syllabus; 2) allocating 30% of internal assessment marks for discussion; 3) introducing continuous practice teaching through block teaching system; 4) associating student teachers with practice schools to provide them total school experience and also to provide benefit to practice schools; 5) undertaking diagnosis and remedial work in neighbouring schools; 6) providing guidance to 10-15 students by each faculty member throughout the year; B. In-service programme - creating outpost centres of school complex of 10-15 schools; 2) establishing schools on wheels and actively involving them in experimentation; 3) persuading secondary schools to adopt primary schools in their area for helping in their work; 4) setting up a nucleus of innovator-headmasters of secondary schools.

TEACHERS

280 DAMLE K: Concept of an effective teacher. (In Shreemati Nathibai Damodar Thackersey Women's University, Bombay. Golden Jubilee Commemoration Volume, Bombay, the University, 1968. 53-66. 15 ref).

Five experienced teachers and 10 postgraduate women students of the S.N.D.T. College, Bombay, separately ranked 15 desirable and 10 undesirable characteristics, selected from two preliminary lists (experiment 1). The lists were again ranked by 50 students and 10 teachers (experiment 2). The rank-difference correlation co-efficients were calculated to find out differences in opinions of teachers and students in the two experiments. In both the experiments, teachers and students significantly differed in their opinions about desirable and undesirable characteristics. While teachers stress 'progressiveness', 'democratic and reasonable nature', students prefer qualities like 'capacity to control the class', 'pleasing temperament and 'sense of humour'. Although both teachers and students have given highest place to "professional or academic qualities', students considered 'personal characteristics' to be very important. Scholastic traits were emphasized more by teachers than by students. Students dislike teachers who deliver lectures in monotonous style, remain aloof from students, have humiliating attitude, and are excessively strict.

281 JOHN V V: Politics and the teacher - raising the wrong objections. Times of India 7 November 1968, p.8, Cols. 3-5. 1170 words.

The suggestion that teachers should be debarred from political activities on the pretext that teacher politicians create campus troubles has been condemned. The machinations of certain academics to further their self-interest through political activities should be distinguished from the intelligent and patriotic involvement of intellectuals in discussions on national issues. The remedy for academic ills lies in providing better academic leadership in universities. The country should not be denied the advantage of the advice and guidance of a group that is admittedly better informed than average professional politicians. Political neutralization of a large section of the people may be more harmful than moderate political activity of the public servant. The real complaint should be that teachers are taking part in political activities in the wrong way. Standards of education should be improved to enable the teaching community to make substantial contributions to discussions on national issues, and teachers should resist the forces that would deny them the right to intervene in public affairs. But it should be ensured that 1) political activities do not become a form of academic truancy; and 2) they should not be aimed at personal gains.

282 NAIK J P: Exchange of teachers in India. NIE Journal 1968, 3(1), 61-3.

The need for organizing a large-scale programme for the exchange of teachers between different linguistic regions has been stressed for achieving national integration and for improving educational standards. While the exchange programme between schools and colleges with Hindi or English as medium of instruction would need only some administrative and financial adjustments, the institutions with other Indian languages as the media would create some problems. Deliberate attempts should be made to develop bilingual teachers at the school stage as suggested by the Education Commission, to solve this problem. To facilitate exchange of teachers at the university stage, the average Indian University teacher would have to be bilingual and students would have to be trilingual. Methods of quick language teaching should also be developed for teaching Indian languages.

283 SRINIVASA RAO M R: Study of pupils' rating of teachers' personality traits. Journal of Education and Psychology 1968, 26(3), 189-96.

The study was undertaken to find out: 1) the traits or qualities pupils expect their teachers to possess, and 2) whether there is any significant difference of opinion between boys and girls with regard to these traits. The primary data for the check list were collected by analyzing the essays written by students reading in Class X on the topic "what I like my teachers to be". For inclusion in the check list, 43 items falling under three categories were selected from the essays: 1) qualities related to teaching; 2) qualities related to attitude of teachers towards pupils; and 3) general qualities. The check list was administered to a sample of 180 boys and 185 girls reading in standard X. Two five-point scales were used by students to rate the same check list in order to ensure that pupils were consistent in their rating of the traits in two different ways. Some inter-checking items were also included to check if the pupils' rating of the same quality differed in the same test. The results indicate that the pupils' rating was consistent. The ranking of the check-list items in accordance with two different scales has been given. Another list gives the ranks grouped under the characteristics.

TEACHING METHODS

284 DEVADASON M D: Two-dimensional teaching and correlated teaching and testing. Rajasthan Board Journal of Education 1968, 4(4), 3-7.

Instead of traditional lesson planning, adoption of the following two methods has been suggested: 1) two-dimensional teaching method in which two teachers teach the same topic in two different classes, but using two different specifications, e.g., forming hypotheses or drawing inferences. The two groups would be tested in accordance with the specifications used; 2) correlated teaching method in which different teachers teach different subjects in the same class but using the same specifications, e.g., interpretation of data, solution of problems. A composite test on the same specification but involving the topics taught in different subject areas is prepared. The methods help both teachers and pupils to understand the fact that different subjects could be utilized for developing the same specification and also the same topic could be taught for developing different specifications.

285 **JAGANNADHA RAO P V**: On teaching of mathematics and science. NIE Journal 1968, 3(1), 23-6.

The deterioration of standard in science education has been attributed to the mechanical approach in teaching which emphasizes memorization rather than understanding the relationships between different aspects of a subject. Three examples of how the teaching of mathematics, physics, and chemistry at school level can be made more effective have been given: 1) teaching algebraic formulae like $(a+b)^2$, $(a+b)^3$ together instead of teaching them in isolation to make the students understand the symmetry in their expansion; 2) using logarithms even in class IX for solving numerical problems in physics although according to the syllabus logarithms come under mathematics in class XI; 3) explaining the causes and mode of chemical reactions instead of teaching the detailed properties of different substances. This would enable the students to predict the properties of any substance.

286 **KARNATAK UNIVERSITY COLLEGE OF EDUCATION, DHARWAR**: Unit Plan teaching. Towards Effective Teaching (University College of Education, Karnatak University, Bulletin No.15) 71p. 6 ref. [Mimeographed].

The unit plan of teaching involves the following steps: 1) pre-planning - (a) formulating the objectives of teaching the unit, (b) analyzing the contents into concepts, (c) organizing the learning experiences, teaching aids, and activities in order to meet the needs and interests of the pupils; 2) teaching - (a) stating the aim, (b) presenting and discussing each concept, (c) improving the learning situation, (d) evaluating the achievement of pupils. If some pupils are found weak in certain respects, diagnostic testing is done and remedial teaching undertaken. Based on these principles, the following specimen units have been presented: 1) Air (science - 5th standard); 2) original inhabitants of India (history-5th standard); 3) crops of India (geography - 8th standard); 4) school as a social institution (social studies). In language teaching, though it is not possible to divide the subject into units, a list prepared on the basis of graded structure can be considered as unit. Such units for teaching English and Kannada have been presented.

287 **KRISHNASWAMY N**: Teaching of second language - the role of mother tongue. NIE Journal 1968, 3(2), 8-12.

It has been stressed that English can be successfully taught without violating the requirements of modern principles of linguistics, using the mother tongue in a formal, explicit and graded manner (translation method). The entire course should be built on the basis of a careful unidirectional (mother tongue to second language) comparison of the two languages. Similarities and differences between the two should be taken into account in grading the material, and special difficulties of speakers of a particular linguistic group should be given due prominence. Although words of one language often do not correspond to those of another, idiomatic equivalents of the phrases and sentences might be considered. Three methods have been suggested for establishing the structure and vocabulary, both oral and written: 1) passive exercise - reading and listening; 2) active exercise - repetition drills, substitution drills, transformation drills etc; 3) exercises that are both active and passive. In free composition, students tried to avoid the area of their weakness and teachers are thus unable to identify them, whereas translation being a guided composition, the students are forced to expose themselves for correction. It focuses the attention of the learner explicitly and repeatedly on an area where the learner needs help.

288 PATHAK O P: Teaching of English in English-medium schools. NIE Journal 1968, 3(1), 9-12.

Principles of structural approach and that of speed, control and significant repetition of a linguistic item have been advocated for attaining four skills of language viz., hearing, speaking, reading, and writing, The existing pattern of teaching has been criticized on three grounds: 1) no stress is given on 'received pronunciation', a form of pronunciation traditionally taught to foreign learners of English; 2) being ignorant of the modern research in linguistics, traditional grammer is taught in the traditional style, e.g. all the forms of verb tense are taught irrespective of whether the frequencies of their use are equal and whether some of them have already been learnt by the children; 3) the curriculum is still burdened with classical literature in outmoded language.

289 PAUL U: Teaching of mechanical engineering drawing. Prajnan 1968, 2(2-3), 15-17.

The main objectives of teaching mechanical engineering drawing are: 1) to provide necessary technical competence and sufficient occupational information to students; 2) to increase their ability to choose and use industrial products (consumer competence); and 3) to develop in students the relevant social abilities. The following suggestions have been given to improve the existing system of teaching in different polytechnics: 1) developing technical competence by imparting basic and specialized technical information and skill; 2) stressing the importance of freehand drawing; and 3) giving assignments involving assembly drawings which require the knowledge of other engineering subjects; 4) encouraging students to use engineering handbooks and manufacturers' catalogues which contain manufacturing and design data; 5) maintaining a reference library in the drawing office; 6) organizing group discussions, field trips, and film shows; 7) organizing co-curricular and extra-curricular activities, such as planning of instruction models, polytechnic workshops, exhibition layout; 8) forming a syllabus committee comprising experienced teachers and professional engineers of local industries.

290 VAIDYA N: Problem solving in science. Delhi, S. Chand & Co., 1968, 187p.

The first chapter describes science teaching in England and in India. The main inadequacies of school science teaching in India and the efforts made to improve it since independence have been described. Development of an Indian tradition of science teaching has been advocated. The next six chapters deal with the following topics: 1) outcomes of science education in terms of functional understandings, scientific skills, scientific attitudes, and scientific appreciations; 2) the theoretical nature of thinking and problem solving, the nature of thinking and problem solving as viewed by philosophers and psychologists, logical steps in problem solving, and illustrations of problem solving; 3) survey of human problem solving with special reference to science teaching the various theoretical standpoints in science teaching, viz. Maltzman's theory, programme learning, Gestalt school, phenomenological theory, Geneva school, acceleration of mental development, factor analytic approach of investigation and information processing, and important research studies in concept formation, problem solving, and teaching of science; 4) an experimental study of problem solving in science conducted by the author in London; 5) implications of science teaching for problem solving based on the study; 6) the immediate problems to be tackled in science education. Appended is a bibliography on problem solving.

291 VASUDEVAN S: Analytical approach to secondary school mathematics. Teaching, 1968, 41(2), 41-7.

The suggested method involves three steps: 1) dividing a problem into several parts; 2) introducing only one difficulty in each part at a time; and 3) leading the pupils on to the solution of the problem. Examples of such analytical approach have been given from arithmetic, algebra and geometry. Since each step leads to the next, the system promotes self-confidence in pupils. The procedure further trains them in analyzing a problem, dividing it into its components, and then solving it.

TESTS AND MEASUREMENTS

292 **BADAMI H D**: Development of a vocational interest inventory. Indian Journal of Applied Psychology 1968, 5(2), 62-5. 1 ref.

The purpose of the inventory is to assist those planning for further education or desiring to take a vocational career. The preliminary material for the inventory was collected from 250 boys and girls in the pre-university classes who were asked to mention five different vocations that they would like to pursue irrespective of economic considerations and social status. The vocations were grouped into the following ten different areas on the basis of Thurstun Interest Schedule: 1) physical science; 2) biological science; 3) computational; 4) business; 5) executive; 6) linguistic; 8) humanitarian; 9) artistic; and 10) musical. The inventory was finally administered during 1965-66 to a sample of 1209 boys and 466 girls reading in various colleges located in the city of Ahmedabad. All forms were scored out and an average profile of the total sample was prepared for comparing individual profile or group profile. Reliability co-efficients were computed for 150 selected inventories. Reliabilities for ten different scores varied between .78 and .90 (table given). Item validities were calculated to ensure that the items were properly allocated in the ten different areas. Inter-correlation between 10 different vocational interest scores have also been presented in a table.

293 **BHATNAGAR R P**: Jalota's test of general intelligence - a note on use. Alumnus 1967, 1(4), 29-31.

The test constructed and standardized by Dr. S Jalota in 1951 consists of 100 items for measuring the general ability of students of the age group 13-16 through verbal ability, reasoning, judgement, and numerical ability and reasoning by analogy. The reliability co-efficient of the test as cited in the manual (Manual of directions for the group test of general manual ability. Varanasi, Psycho-Centre, 1964) is 0.938. The validity co-efficients with school marks vary from + 0.50 to + 0.58. The test was administered by the present author to a sample of 2370 students of classes IX and X in 32 schools of Delhi in 1962-63. The mean, standard deviation and standard error of the total sample, and also the standard errors of various score-levels were calculated for better understanding of the test. The mean of the total sample and standard deviation were 49.01 and 12.3 respectively. The standard error at the mean level, 75th percentile level and 95th percentile level were 4.92, 4.95 and 4.51 respectively. This shows that even in a large sample the test is fairly reliable at various score levels. The reliability of the test calculated by K.R. formula gave favourable results.

294 **DAS J P, DUTTA T**: Standardization of coloured progressive matrices - norms for 10, 11 and 12 year old school children. Journal of Psychological Researches 1968, 12(3), 143-8. 3 ref.

A sample of 464 school children in Bhubaneswar city area was subjected to the test. The results have been compared with those of Raven (Guide to using the coloured progressive matrices, London, H.K. Lewis & Co., 1953). The significant points revealed in the study are: 1) normal score composition of total scores. Out of 26 total scores of Raven, 17 have identical distribution with those obtained in the study; 2) working percentile points - percentile for 10-year-old and 11-year-old boys in both the studies appear to be the same. Inaccurate age figure obtained from the school records explain the overlap. Compared to Raven's figure, 10-year-old boys in this study were slightly superior at the 95th percentile level, equal to Raven's sample at 90th and 75th percentile levels, and slightly inferior at the 50th percentile level. The disparity below 50th percentile level is quite prominent, and at the 5th percentile level, Raven's scores were more than twice as large as for both the 10-year-old and 11-year-old boys. If cultural difference between the two samples would account for such disparity, it is clear that this difference becomes more effective only in sub-normal levels of intelligence.

295 **MALIN A J**: Adaptation of the Wechsler Intelligence Scale of Indian children. Journal of Rehabilitation in Asia 1968, 9(4), 19-20. 11 ref.

A short paper based on the author's doctoral thesis (Indian adaptation of Wechsler Intelligence Scale for Indian children. Nagpur University. 1966). The object was to develop a basic culture-free test in the English medium suitable for translation or adaptation in the different regional languages. The four sub-tests viz. information, comprehension, similarities and vocabulary, needed complete reconstruction. The numbers in the arithmetic sub-test could be retained although the items of the problems were culture-biased. In view of the radical revision, the test has been named Intelligence Scale for Indian Children. A sample of about 600 English-speaking children from northern and central regions of India was used for the study. The usual standardization procedures were employed. Indian performance test scores were very low compared to American norms of the WISC but their verbal I.Q scores were about 10% higher than the U.S. norms. Better memory of Indian children and the high quality of the test samples explain the position. Lower Indian scores on the performance of non-verbal items may be due to the following factors: 1) a cultural or environmental bias due to underexposure to two-dimensional pictures or line drawings; 2) standard performance items based on Western types of play materials unknown to Indian children; and 3) high verbal and impractical character of Indian school educators.

296 NIJHAWAN H K: Concepts of accuracy versus consistency with relation to test-reliability. Journal of Education and Psychology 1968, 26(3), 292-7. 22 ref.

From a review of the relevant literature on the controversy, it has been concluded that reliability described in terms of 'accuracy' and 'errors' is more intelligible and the idea of consistency is implied in it. A test which is accurate would give more or less consistent results. If it does not, the inconsistency may be interpreted as due to causes other than the errors of measurement.

297 RAINA T K: Evaluation of an achievement test in general science. Education and Psychology Review 1968, 8(4), 263-73. 16 ref.

The object of the study was to determine the validity and reliability coefficients and to evaluate other characteristics of the Achievement Test in General Science developed by K N Saxena (Manual of directions for the general science achievement test. Allahabad, Kitab Mahal) by administering the test on two different populations (Punjab and Delhi) and also to compare the findings with the normative sample (Uttar Pradesh) on which the test was standardized. The test was administered to a sample of 375 students (288 boys and 87 girls) of Punjab and 400 students (200 boys and 200 girls) of New Delhi at the Class VIII level. The samples consisted of rural and urban students. The findings are: 1)the reliability coefficients (Punjab .94, New Delhi .84 and U.P..88) determined by the method of rational equivalence were reasonably high; 2) the indices of reliability coefficients (Punjab .96, New Delhi .92, and U.P..94) indicate that the test has a fairly good consistency; 3) the empirical validity coefficients were .48 (Punjab) and .45 (New Delhi), as found by correlating the test scores with marks obtained in science in the school examination. The corresponding figure for the normative samples was .46. Other relevant data are: 1) means: Punjab 25.06, New Delhi 27.35, U.P. 26.80; 2) SDs: Punjab 12.00, New Delhi 12.88,U.P.12.40; 3) standard errors of means: Punjab .619, New Delhi .265, U.P. .265. So far as the variability of the test is concerned, there is no significant statistical difference between the three samples. The achievement of boys is better than that of girls, and urban boys showed better performance than rural boys.

298 SHARADAMBA RAO: Vocabulary test in Hindi for high school boys. Indian Journal of Applied Psychology 1968, 5(2), 74-8. 4 ref.

An attempt has been made to standardize a vocabulary test as part of the Hindi adaptation of Kamath Intelligence Test (Kamath V V. Measuring intelligence of Indian children. Bombay, Oxford University Press, 1967 - see Indian Educational Material vol. 2, abstract no. 154). A list of 100 Hindi words randomly selected from a popular dictionary was administered to 840 boys studying in Hindi-medium middle and high schools of Ranchi (Bihar). The results have been presented in three tables: 1) mean age, S.D., and co-efficient of age distribution of boys in each grade; 2) mean vocabulary scores, S.D. of the score distribution, and co-efficient of variation in scores; 3) weighted mean vocabulary score, mean age, mean variation in age, vocabulary score for different grades. Weighted mean score plotted against age indicates a sudden improvement in vocabulary score after the age of 13 which corresponds to the completion of 7 years of schooling. The test seems to be highly promising since it differentiates various age groups and grades.

VOCATIONAL AND TECHNICAL EDUCATION

299 DUTTA B K: Training within industry for supervisors. Economic Times 30 November 1968, p.5, Cols. 3-6, p.6, Cols. 6-8. 3390 words.

Training within industry (TWI) improves three skills of supervisors: 1) skill in instruction (job instruction); 2) skill in leadership (job relation); 3) skill in improving methods (job method). The programme enables the supervisor to impart effective instruction to the men working under him, so as to enable them to do their job correctly, safely, expeditiously and conscientiously. The training further improves the supervisor's ability to maintain good relationship with workers. It helps the supervisor to make the best possible use of manpower, machines and materials at his disposal by constantly reviewing existing methods and exploring the possibility of their improvement. Training should be imparted through discussion and related to actual problems in production. The number of trainees in a group should not exceed 10 and a period of ten hours divided into five two-hour sessions on consecutive days may be allotted to each of the three programmes.

300 SINGHAL J P: Training of workers - weavers in textile industry. Textile Machinery Accessories and Stores, 1968, 4(5), 29-32.

Describes a scheme of training within industry (TWI) designed and conducted by the author. The syllabus covers the following topics: 1) safety and house-keeping; 2) systematic operation of the looms to maximize production; 3) types of cloth-damage and remedial-measures; 4) knowledge of the loom and its maintenance; 5) work-study methods; 6) behaviour, discipline, and general rules and regulations; 7) cooperation between different departments; 8) effects of absenteeism; 9) grievance procedure. Five methods of imparting training have been advocated: 1) classroom lectures on TWI pattern; 2) practical demonstration; 3) putting up display boards in the departments; 4) distribution of informative booklets in regional languages; 5) use of audio-visual aids. The qualities of suitable training officers have been listed.

WORKERS' EDUCATION

301 MUTHUSWAMY R: Training trade unionist - a voluntary effort. Social Action 1968, 18(4), 324-9.

Presents an account of the activities of the Institute of Workers' Education (Bombay), a non-profit organization, having the following objectives: 1) educating and training workers in the principles of sound trade unionism; 2) training them in tackling industrial disputes; 3) preparing capable workers for trade union leadership; 4) co-operating with similar organizations in India and abroad. The two main courses conducted are: 1) basic training in trade unionism at workers' level (16 lessons each of 1½-2 hours' duration); 2) training with a slant on union management and decision-making for union functionaries (8 lessons of 2 hours' duration). The syllabi of the courses cover the following topics: 1) history of Indian and international trade unionism; 2) techniques of organization; 3) structure of trade unionism; 4) finance and administration; 5) labour laws; 6) collective bargaining; 7) trade union vis-a-vis economics, politics and the society.

List of Periodicals Abstracted

Alumnus: V 1, No 4
Bulletin of the West Bengal Headmasters' Association: V 17, No 10
Christian Education: V 18, No 4
Economic Affairs: V 13, Nos 1-2
Education: V 42, No 11; V 47, No 10
Education and Psychology Review: V 8, No 4
Educational India: V 35, Nos 3, 5-6
Educational Trends: V 2, Nos 3-4
Haryana Journal of Education: V 1, Nos 3, 4
Indian Education: V 7, No 12; V 8, No 1
Indian and Foreign Review: V 5, No 17
Indian Journal of Adult Education: V 29, No 11
Indian Journal of Applied Psychology: V 5, No 2
Indian Journal of Medical Education: V 7, No 5
Indian Journal of Medical Research: V 56, No 11
Indian Journal of Pharmaceutical Education: V 2, No 2
Integrated Management: 1968 No 30
Journal of the Association of Principals of Technical Institutions (India): V 21, Nos 1-2
Journal of Education and Psychology: V 26, No 3
Journal of Educational Research and Extension: V 5, No 2
Journal of Psychological Researches: V 12, No 3
Journal of Rehabilitation in Asia: V 9, No 4
Kurukshetra: V 17, No 2
Library Herald: V 10, No 1
Maharashtra Educational Journal: V 17, No 3
Manabman: V 7, No 4
Manpower Journal: V 4, No 2
Mathematics Education: V 2, Nos 3, 4
NIE Journal: V 2, No 6; V 3, Nos 1, 2
Orissa Education Magazine: V 12, No 1
Prajnan: V 2, Nos 2-3
Progress of Education: V 43, No 3
Psychology Annual: No 2
Rajasthan Board Journal of Education: V 4, Nos 3, 4
Seminar: 1968, No 112
Social Action: V 18, Nos 3, 4, 5
Social Welfare: V 15, Nos 7, 9
Teacher Education: V 3, No 1
Teacher Speaks: 1968, 5
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Towards Effective Teaching: 1968, No 15
Tribe: V 4, No 1
University News: V 6, No 11
Vanyajati: V 16, No 4
Vishwakarma: V 9, No 7
VOC Journal of Education: V 8, No 3
Yojana: V 12, No 20

Newspapers:

Economic Times: 8 Oct; 23, 30 Nov
Hindu: 6, 17, 18, 19 Nov; 8 Dec
Mail: 3, 7 Dec
Searchlight: 21 Oct
Statesman: 5, 16, 31 Oct; 11 Nov
Times of India: 7, 22 Nov; 5, 10 Dec

SPECIAL SECTION

WOMEN'S EDUCATION

A38 DESAI N: Educated women - some problems of her role perception and role performance. (In Shrimati Nathibai Damodar Thackersey Women's University, Bombay. Golden Jubilee Commemoration Volume (1916-66). Bombay, the University, 1968. 126-33).

The nature of social expectations from educated women and the contextual social situations responsible for their non-fulfilment have been examined. The various responsibilities and duties expected of educated women are: 1) socializing the younger generation by acting as torch-bearers of new values and social change; 2) harmonizing the relationship in the family and establishing proper adjustments between the family and the society; 3) acting as independent citizens with their own human personality; 4) contributing to national economy as members of the work-force. The special social factors which prevent girls from taking full advantage of education are: 1) emphasis on marriage and motherhood; 2) domestic duties; 3) secondary importance given to academic achievements; 4) uncertainty in the continuity of education. Even a few educated women who could cross all these hurdles, find it difficult to practise the imbibed values in day-to-day life on account of poor economic conditions and various religious and social rituals based on traditional values of the past.

A39 GREAT BRITAIN. INDIAN STATUTORY COMMISSION ON CONSTITUTIONAL REFORMS. AUXILIARY COMMITTEE (1929): Education of girls and women (In its interim report - review of growth of education in British India. Calcutta, Central Publications Branch, 1930. 145-83). [Chairman: Sir Philip J Hartog]

The Committee fully realized the need and importance of girls' and women's education as it affects vitally the range and efficiency of education as a whole. Lack of education lowers the level of domestic life, which in turn affects personal and national character. Education would enable Indian women to contribute in increasing measure to the culture, ideals, and activities of the nation. The Committee noticed the great and growing disparity between the progress of education of boys and girls. The expenditure on girls' education was small compared to that on boys' education. Rate of growth of girls' education varied from province to province and it was necessarily slower in rural than in urban areas. Educational facilities in rural areas were generally limited. The total number of women in colleges, largely consisting of Indian Christians, was very small and that in professional colleges was even smaller. The wastage, immense in boys' schools, was still greater in girls' schools which produced a much smaller proportion of literates. Early withdrawal of girls from schools, absence of women teachers, and inefficiency of schools were the causes. The shortage of women teachers due to lack of adequate training facilities, unwillingness of women teachers to work in rural areas, and inadequate salary of teachers affected the growth of separate primary schools for girls. The Committee preferred co-educational schools, in spite of their obvious difficulties, to inefficient separate primary schools for girls. The Committee pointed out that girls' education should not be dominated by university requirements. It recommended that competent women officers should be associated with the policy-making and administrative bodies relating to education. Deliberate and unremitting efforts to overcome the obstacles, formulation of policy with careful adjustment of means to ends, and generous provision of money, institutions and personnel, have been strongly recommended.

A40 INDIA. CENTRAL ADVISORY BOARD OF EDUCATION: Girls Education. (In India. Ministry of Education. Reconstruction of secondary education. New Delhi, Manager of Publications, 1967. 70-1).

The recommendations made by the Board at its different meetings are: 1) 1961 (item No. 4 ii). For the successful implementation of the programme of universal and free primary education, the special programme for women's education should be promoted as a Centrally sponsored scheme, and funds should be earmarked outside the State plan allocations. The scheme should include construction of hostels for girls in elementary and secondary schools; 2) 1962 (item no. 6(c). Suitable steps for increasing the output of women teachers should be taken during the Third Plan to meet the increasing demand for women teachers during the Fourth Plan; 3) 1963 (item No. 3(3) (a). Centrally sponsored schemes should be introduced for the expansion of girls' education and the training and employment of women teachers, as measures essential for equalizing educational opportunities.

A41 INDIA. COMMITTEE ON EMOTIONAL INTEGRATION: [Girls' education] (In its report. Delhi, Manager of Publications, for Ministry of Education, 1962. 65-66). [Chairman: Dr Sampurnanand]

One of the objectives of the Committee was to study the role of education in the promotion of emotional integration in national life. In the chapter on school education, the Committee expressed great concern over the low percentage of enrolment of girls in schools. Discontinuation of two Centrally sponsored schemes for the expansion of girls' education, and the training facilities for teachers from the Third Five Year Plan had been deplored and their revival advocated. It would then be possible to revise the targets fixed for primary education and aim at universalizing enrolment by 1965-66. Effective steps should be taken for the implementation of a national policy to employ women teachers in increasing numbers. This would necessarily imply providing special incentives and facilities to attract women to the profession.

A42 INDIA. EDUCATION COMMISSION (1964-66): [Education of girls] (In its report - Education and national development. Delhi, Manager of Publications, 1966. 63-4, 121, 135-9, 164, 175, 207-9, 312-14, 375, 631, 633, 634, 651).

The Commission made references to the problem of women's education in six chapters: 1) teacher status (chapter 3); 2) equalization of educational opportunities (chapter 6); 3) problems of expansion of school education (chapter 7); 4) school curriculum (chapter 8); 5) higher education - enrolment and programmes (chapter 12); and 6) vocational, technical and engineering education (chapter 15). A great disparity exists between the number of male and female teachers. Increasing the number of women teachers at all stages particularly in rural primary schools, and appointment of at least one woman teacher in mixed institutions have been recommended. Although, during 1950/51-1965/66 the rate of expansion of the education of girls was much faster than that of boys, the problem of fulfilling the Constitutional directive remains essentially the problem of educating girls. The Commission endorsed the special measures recommended by the National Committee of Women's Education for the expansion of girls' education, but stressed that special measures should be of temporary nature. Education of girls at all stages and in all sectors should be an integral part of general programmes for the expansion and improvement of education. The recommended targets are: 1) lower primary stage - increasing the proportion of enrolment of girls to that of boys from 1:3 (in 1965-66) to 1:2 during the next 20 years; 2) higher secondary stage - similar increase from 1:5 (in 1965-66) to 1:3. The recommendation of the Hansa Mehta Committee (see Indian Educational Material v.3, abstract no. A66), favouring common curriculum for boys and girls has been endorsed. The recommendations are: 1) provision of home science only as an optional subject for girls; 2) larger provision for teaching music and fine arts, mathematics, and science. The recommendations concerning higher education are: 1) increasing the proportion of women students to men students from 1:4 in 1965-66 to 1:3 in 20 years; 2) opening separate colleges for women at undergraduate level if there is local demand, but not at postgraduate level; 3) developing courses in home science, nursing, education and social work, as these have an attraction for large number of girls; 4) provision of facilities for advanced studies in business administration and management; 5) setting up research units in one or two universities to deal specifically with women's education. Other suggestions are: 1) introducing short, full-time, or part-time courses in home science or household industries like tailoring, pottery, and dairying for girls leaving the primary school; 2) developing courses of special interest to girls in all polytechnics, e.g. secretarial practice, pharmacy, electronics and radio technology, library science; 3) creating a special machinery at the Centre and in the States to look after the education of girls and women; 4) expansion of opportunities for part-time and full-time employment for women. In general the recommendations of the National Committee on Women's Education, and the Bhaktavatsalam Committee which studied the problem of primary education with special reference to six States have been endorsed. _/ see Indian Educational Material v.3, abstract no A67 _/.

A43 INDIA. MINISTRY OF EDUCATION: Central scheme of assistance to States for expansion of girls' education and training of women teachers. (In India. National Committee of Women's Education (1958-59). Report. Delhi, Manager of Publications (for Ministry of Education, 1959. 271-7).

For elementary school teachers the scheme covers the following: 1) provision of free accommodation for women teachers in rural areas; 2) appointment of school mothers and arrangement for a short course of training for them; 3) organizing condensed and special courses on general education-cum-teacher education for adult women desirous of taking to teaching; 4) granting stipends to women students of teacher training courses at the undergraduate level; 5) organizing refresher courses for women teachers; 6) granting stipends to girl students of classes VIII-X, provided they agree to work as teachers for 5 years. The scheme provides attendance scholarships and exemption from tuition fees for girls reading in elementary schools (except public schools). The Central assistance would be to the extent of 75% of the expenditure involved. Allocation of funds to the State governments would be on the basis of the number of girls in the age group 6-14 not attending schools. The scheme also included the following programmes, not involving much finance, for implementation during the Second Plan: 1) raising the maximum age of recruitment for women teachers to about 40-45 years; 2) relaxation of educational qualifications for women teachers; 3) permitting part-time employment of women teachers; 4) giving preference to women teachers both for boys' and girls' schools; 5) giving preference to married men teachers whose wives could be appointed as school mothers; 6) reserving increasing number of seats in teacher training institutions; 7) permitting girl students to appear as private candidates in different examinations; 8) encouraging co-education at elementary stage; 9) introducing two shifts in schools - one for boys and the other for girls; 10) orienting the curriculum to the Indian pattern of society particularly in rural areas.

A44 INDIA. MINISTRY OF EDUCATION: [Statistics of education of girls]. (In its Education in India ... 1942/45 - . Delhi, Manager of Publications, 1947- .

The annual publication, in two parts, is a record of the progress of education in India. The first part presents the report along with relevant statistical data [see Indian Educational Material v.1, abstract no. 26] and the second part contains consolidated all-India statistics on various aspects of education [see Indian Educational Material v.3, abstract no. 259]. In the first part (for the year 1961-62, published in 1968), besides a review on the education of girls (pp. 312-17), the following separate statistical tables (State-wise data) are given: girls in primary schools (p.55), girls in middle schools (p.123), girls in high/higher secondary schools (p.143), number of girls in higher education (p.186), distribution of boys and girls in recognized institutions (p.315). The second part (for the year 1963-64, published in 1968) presents the following separate tables: distribution of pupils in institutions (by levels and types) for girls (pp.24-29), expenditure on institutions (by levels and types) for girls (pp. 48-71). Besides, in both the parts, wherever relevant, other tables present data for boys and girls separately. Two other annual publications of the Ministry in which data on girls' education are available (not in separate tables) are: Education in the States 1948/49- . [see Indian Educational Material v.1, abstract no. 1035], and Education in Universities in India 1947/48- . (latest:1962-63, published in 1968).

A45 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Curricula and syllabi. (In its report. Delhi, Manager of Publications, 1959. 83-92).

There is hardly any need for differentiation between the curricula of boys and girls at the primary stage, except that subjects like music, painting, sewing, needle work, simple hand work and cooking should be introduced to make the course more suitable for girls. The need for differentiation begins at the middle stage and increases at the secondary stage, owing partly to the physical, intellectual, emotional and temperamental differences between boys and girls, that begin to manifest themselves at this age, and partly to the difference in nature of duties and responsibilities that would ultimately devolve on boys and girls. The provision of a number of electives, and the introduction of some prevocational courses without involving additional burden, have been suggested at the middle stage. At the secondary stage, there should be a wider diversification and several courses (as for example, secretarial courses, courses leading to social swork, crafts, training courses for preparing pre-primary or primary teachers or social educational workers) suitable for new careers that are now open to girls. Special diversification should not imply lowering of standards or restricting access to other courses. Other general reforms suggested are: 1) correcting the imbalance of the existing curricula which mostly cater to the needs of boys; 2) simplifying the existing courses, and eliminating co-curricular activities; 3) adoption of programmes for developing the moral sense of students; 4) suitable modification of courses to make them less academic and more practical in nature. Implementation of the suggestions would not involve large-scale modification of the existing educational pattern.

A46 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Education of girls in the age group of 6-11 (primary stage) (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 40-55, 196-7.

Government's policy to introduce universal free and compulsory education at least for the age group 6-11 by 1965-66 implies an annual increase in enrolment of girls of about 2.1 million during the period 1956/57-1965/66. A concentrated effort on the part of the nation as a whole is necessary to achieve this objective. At this level of education, there is no need for making any wide division between the education of boys and girls, since almost all steps necessary to improve or expand the education of boys would automatically involve an expansion and improvement of the education of girls and vice-versa. The general measures of reform needed at this stage are: 1) provision of free education where it does not exist; 2) opening new schools in school-less areas; 3) provision of peripatetic teachers, central schools with hostel arrangements and/or transport facilities for small and scattered habitations in hill, forest or desert areas and for nomadic population; 4) encouragement of private efforts to start new schools; 5) improvement in quality of education through provision of better staff, buildings, equipment, and through better methods and materials of teaching; 6) provision of mid-day meals; 7) provision of part-time instruction. Special measures required for girls are: 1) appointment of women teachers or of school mothers; 2) setting up separate schools for girls only, in places where a strong public demand for them exists, and where the number of girls justifies their establishment; 3) organizing educative propaganda to remove the existing prejudices against co-education; 4) encouraging the opening of creches; 5) granting of attendance prizes and scholarships to children and graded attendance allowance to teachers on the basis of attendance of girls in their schools; 6) organizing women's education week every year throughout the country and social education amongst women; 7) associating elderly women of the village with primary schools.

A47 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Education of girls in the age group of 11-17 (middle and secondary stages). (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 56-66, 197-200).

The existing gap between the education of boys and girls is wider at the middle stage than the primary stage, and increases still further at the secondary stage. The educational facilities should be increased for the girls in this age group, because women primary teachers or other women social workers required for the plans would come from the middle and secondary schools. By the end of the Third Plan, disparity between the enrolment of boys and girls in the age group 11-14 should be substantially reduced, and altogether eliminated by the end of the Fourth Plan. The controversial issue of co-education has been discussed and it has been recommended that at the middle stage, more and more co-educational institutions should be started. However, for the secondary stage, establishment of separate girls' schools, especially in rural areas, has been suggested. But the difficulties and apprehensions of parents in respect of co-education at this stage should be removed by adopting several measures such as the appointment of the right type of principals for co-educational schools, closer association of parents with the working of schools, appointment of a large number of women teachers/principals, and running separate shifts for boys and girls in the same school. Four factors retarding the progress of girls' education in the middle and secondary stages have been pointed out: 1) inadequate appreciation of the needs of girls' education; 2) social and economic conditions of the people; 3) inadequacy of school facilities; 4) absence of any centrally sponsored scheme for promoting girls education at the secondary stage. The measures suggested for overcoming the difficulties include: 1) free education at the middle stage; 2) grant of liberal exemptions, full and partial, from tuition and other fees; 3) provision of suitable hostel facilities to all poor and deserving girls; 4) non-matching grant for the construction of hostels; 5) provision of free or subsidized transport facilities; 6) provision of special facilities required by girls in all co-educational schools; 7) provision of free books, stationery and other educational equipment to all girls whose parents have an income below a specified level; 8) grant of financial assistance to needy girls at the secondary stage; 9) provision of merit scholarships for deserving girls at the middle and secondary stages; 10) provision of guidance services in schools; 11) provision of part-time education; and 12) opening of creches.

A48 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Education for women in India - a historical survey (1800-1947) (In its report. Delhi, Manager of Publications, (for Ministry of Education), 1959. 13-30).

A review has been made of the education of women from 1800 when it was at a very low ebb, to 1947 when the British withdrew from India. Although the education of women had improved considerably, the overall picture was far from satisfactory even in 1947. The percentage of literacy among women was as low as 6.0%, in 1941 (as gainst 22.6% for men) and even a decade later it increased to only 9.3%. Enrolment of girls at all levels was about 1.3% of the estimated population for 1946-47. Only 30 girls attended educational institutions for every 100 boys. The gap was widest at the college level. A disproportionately large part of enrolment was confined to urban areas. The slow progress had been attributed to three reasons: 1) the decision of the government to leave the education of women mainly to the private sector. Because the people were pre-occupied with the political struggle, the pace of expansion was adversely affected. No public effort was available in rural areas; 2) government's reluctance to interfere with the socio-religious aspects, and the adverse political conditions were not conducive to the growth of women's education; 3) lack of adequate funds for women's education during the British period.

A49 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Report. Delhi, Manager of Publications (for Ministry of Education), 1959. ix, 335p. [Chairman: Mrs Durgabai Deshmukh].

The terms of reference of the Committee were: 1) suggesting special measures for promoting women's education at the primary and the secondary levels, and examining the problem of wastage in girls' education at these levels; 2) examining the special educational problems of adult women, surveying the activities of voluntary organizations in this sphere, and recommending suitable measures to enlarge the scope of their activities; 3) devising ways and means for expanding vocational training programmes either as a part of formal education or through special courses designed for adult women. The report contains the following chapters: 1) introduction; 2) basic approaches and fundamental considerations; 3) a historical survey of women's education in India (1800-1947); 4) statement of the problem; 5) education of girls in the age group 6-11 (primary stage); 6) education of girls in the age group 11-17 (middle and secondary stages); 7) wastage and stagnation at primary and secondary stages; 8) curricula and syllabi; 9) training and employment of women teachers; 10) professional and vocational education; 11) special educational facilities for adult women; 12) role of of voluntary organizations; 13) some special problems; 14) organization, administration and finance; 15) general conclusions; 16) recommendations; and 17) documents and data relating to the work of the Commission. There are 185 recommendations under three categories: 1) special recommendations which require top priority and immediate consideration (20), other special recommendations (135), and general recommendations covering the educational programmes of boys and girls (30). The special recommendations mostly concern the question of organization and finance discussed in chapter 14. They include: 1) setting up as early as possible a National Council for the Education of Girls and Women by the Central government and similar State Councils by State governments; 2) taking over the major responsibility of education of women by the Centre; 3) appointment of a senior officer in the Ministry of Education to look after the problem of education of girls and women, and appointment of similar officers in all States; 4) an additional provision of Rs.100 million to be spent for the education of girls and women during the remaining period of the Second Five Year Plan and special provision during the Third Plan; and 5) abolition of the matching grant system and taking over the entire financial responsibilities by the Centre. Other recommendations have been included in the abstracts of other chapters.

A50 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Role of voluntary organizations. (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 142-55).

Voluntary organizations had played a significant role in providing educational facilities to women before and after independence. Extensive utilization of their services has been recommended for imparting education to women in fields like teacher education, adult education, vocational and social education, and also at middle, secondary and higher levels. The following recommendations have, therefore, been made for the removal of difficulties curbing the activities of the organizations: 1) grants-in-aid to girls' institutions should be substantially more liberal than those for boys' institutions of corresponding status. Institutions in rural areas should receive special treatment; 2) procedures for payment of grants should be simplified; 3) organizations of standing and repute should not be required to raise any matching contribution. In other cases, matching funds should not exceed 50% of those expected for boys' schools of corresponding status; 4) liberal non-recurring grants should be provided for building hostels and staff quarters for girls' institutions, especially in rural areas. Central government should make special budget provision for direct grants-in-aid to educational institutions involved in experimentation in women's education. Special encouragement to women welfare organizations engaged in women's education has also been advocated.

A51 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Some special problems [of women's education]. (In its report. Delhi, Manager of Publications (for Ministry of Education, 1959. 156-65).

Expansion of higher education for girls has been suggested for producing the large number of women teachers required for increasing the educational facilities for girls at the middle and secondary stages, especially in rural areas. The University Grants Commission should earmark at least Rs.10 million to provide hostel facilities for girls reading in universities. In addition, scholarship schemes and other financial incentives should be introduced. A few institutions should be developed for conducting research on women's education. Other suggestions are: 1) appointment of a special committee to examine the problem of pre-primary education and adoption of measures for the quick development of education at this level; 2) allocation of a portion of the funds now set apart for the welfare of the backward classes for the development of education among the women of those communities; 3) developing training facilities for women teachers needed for institutions for handicapped children; 4) expansion of literacy classes for women and organization of intensive literacy campaigns in selected areas; 5) setting up a permanent machinery in the Planning Commission for evaluating the woman-power requirements. The reduction of the facilities for medical education for women had been disapproved and setting up a high-power committee had been proposed to examine the question.

A52 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Special educational facilities for adult women. (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 129-41, 210-13).

Special educational facilities for adult women whose education in childhood was either neglected or inadequate should be provided for two reasons: 1) to enable them either to earn their livelihood or to supplement their family income; 2) to overcome the shortage of woman-power during the Second and Third Plans. The programme should aim at equipping adult women for some gainful occupations within a short period. It should be in the form of condensed courses which would prepare women for middle school and high/higher secondary examinations and also would train them for suitable vocations after completion of the necessary continuation education. The duration of the courses would depend upon the educational level already attained, aptitude, and conditions for study. To facilitate teaching, the course in each school subject should be divided into suitable units so that on completion of one unit within a specified period, new units could be commenced. The question of exempting them from appearing in some subjects, or parts thereof, however, needs examination. The apprehension of fall in standard of education had been ruled out. Since voluntary organizations are specially suited to undertake this activity, they should be encouraged through non-matching grants to expand their activities as much as possible.

A53 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Training and employment of women teachers (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 93-114, 202-6, 225).

In 1956-57, women teachers formed only 17.1% of the total number of teachers at the primary stage. The corresponding percentages at middle, secondary, and collegiate stages were 18.7, 19, and 11% respectively. Achievement of the Third Plan target of 26.5, 21.2, and 21.2 at the primary, middle and secondary stages respectively, although unsatisfactory, needs adoption of measures to overcome the varied social, economic and psychological factors preventing women from taking to teaching as a career. Three measures have been suggested: 1) increasing the economic status of the teaching profession to attract better calibre of individuals to it; 2) expanding existing training facilities by setting up new teacher training institutions in areas facing teacher shortage, at least one training insitute in every district, and locating training institutions for primary teachers in rural areas by combining such institutions with secondary schools for girls; 3) inducing educated women of urban areas to join rural schools by offering some special incentives. However, the real solution lies in the development of a scheme of training of rural women as teachers. The following steps are necessary for this purpose: 1) reducing the minimum qualifications for women teachers from the existing secondary to the middle school standard; 2) locating training institutions in rural areas; 3) providing adequate scholarships to rural girls studying in training institutions; 4) giving preference to rural girls while selecting candidates either for training institutions or for employment as teachers; 5) developing middle and secondary schools for girls in rural areas; 6) organizing special educational facilities for preparing rural adult women for middle school and high school examinations, and for the teaching profession. Other suggestions are: 1) selection of suitable girls in the last two years of the middle or secondary schools, who are prepared to work as teachers in rural areas; 2) making adequate arrangements to secure jobs for trained women through placement centres; 3) provision of part-time teaching.

A54 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Vocational education and training for employment. (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 115-28, 206-10, 282-7).

Provision of adequate facilities for the training and employment of more women in the teaching profession, and in other vocations suitable to women has been stressed. Vocational training facilities for women, which are extremely limited, should be expanded. Training should be given either as a part of formal education which would be full-time, or as special part-time or full-time courses designed for adult women. In view of the availability of a great variety of occupations, each requiring different levels of proficiency in general education, training would be different for courses requiring primary, middle, secondary or university education as the minimum pre-entrance qualifications. These courses should be organized in primary, middle, secondary and multipurpose high schools or in separate vocational schools, apprenticeship classes, training centres, and workshops. Expansion of training facilities should, however, be undertaken only after assessing the woman-power requirements, so that immediately on completion of training, women are absorbed in gainful occupations. Co-operation between educational institutions and the industry is very necessary. Other suggestions are: 1) proper functioning of employment exchanges; 2) relaxation in age for entry to services in the case of women; 3) setting up hostels for working women. The appendices include a list of vocations suitable for women which require training with primary, intermediate and degree as the minimum basic qualifications.

A55 INDIA. NATIONAL COMMITTEE ON WOMEN'S EDUCATION (1958-59): Wastage and stagnation in the education of girls at the primary and secondary levels (In its report. Delhi, Manager of Publications (for Ministry of Education), 1959. 67-82, 223-5).

The problems of wastage and stagnation are common to the educational system as a whole although their incidences are higher in respect of girls. The Ministry of Education should undertake a scientific investigation of the problem. The annual statistical report (Education in India) published by the Ministry should contain a section on stagnation. Stagnation is particularly high in class I and failures are very high at the middle secondary or higher secondary stages. Wastage is very high at the primary stage, as is evident from the fact that 74% of girls who join class I in a given year do not reach class V after five years. At the middle and secondary stages also, a considerable number of girls give up schooling for economic and social reasons. The stagnation in class I is caused by four factors: 1) uncontrolled fresh admissions; 2) irregular attendance; 3) low age of admission; and 4) inefficient teaching. The stagnation iat the middle and secondary stages is mainly due to irregularities of attendance and inefficient teaching. About 90-95% of the wastage at the primary stage are caused by economic factors and indifference of parents. Other causes are: 1) stagnation; 2) lack of educational equipment; 3) failure to make provision for all the five classes in primary schools; and 4) marriage. Marriage and economic factors cause wastage at the middle and secondary stages. The remedial measures for reducing stagnation are: 1) fresh admission not later than 60 days after the beginning of the first session; 2) regular attendance of teachers; 3) raising the age of admission; 4) improving the standard of teaching; 5) introduction of internal examinations and provision of books and other educational equipment for students in classes II-V. Remedial measures for reducing wastage are: 1) provision of part-time instruction; 2) reduction of stagnation; 3) improvement of standard of teaching; 4) free supply of books, clothing etc; 5) enforcement of child marriage act; 6) elimination of primary schools which do not provide all the five classes; 7) adjustment of school hours and vacations to suit local needs and conditions; 8) organizing educative propaganda and rigorous enforcement of the compulsory education law.

A56 INDIA. PLANNING COMMISSION: Woman-power requirement - study by Planning Commission (In India. National Committee on Women's Education (1958-59). Report. Delhi, Manager of Publications (for Ministry of Education), 1959. 263-9).

At the request of the National Committee on Women's Education (1958-59) the Planning Commission in collaboration with the Directorate General of Resettlement and Employment had prepared an estimate of the requirements of women personnel in the following sectors during the Second and Third Plans: 1) education; 2) health; 3) social welfare; and 4) small-scale industries. The additional requirement of 3,22,300 primary teachers is based on the enrolment target of 61.32% of the girls in the age-group 6-11. The corresponding figures for the middle stage are: 45,500 and 12.72% [17% is the target fixed in the Third Plan, see Indian Educational Material, v.3, abstract no. A57] of the girls in the age-group 11-14. The requirements for the secondary stage and for the other types of education are 26,400 and 14,080 respectively.

A57 INDIA. PLANNING COMMISSION: [Women's education in Five Year Plans] (In its First Five Year Plan. New Delhi, the Commission, 1953. 557-9; Second Five Year Plan. New Delhi, the Commission, 1956. 504, 510; Third Five Year Plan. New Delhi, the Commission, 1961. 580-2, 585, 590-2).

The principles guiding the planning of women's education during the First Five Year Plan would be: 1) provision of equal educational opportunities to boys and girls; 2) recognition of four age-groups for the purpose of planning, viz. (a) 5-11, (b) 11- , (c) married girls above these age groups, who are looking after their families, and (d) unmarried girls above these age-groups, who have to learn some vocation to earn their livelihood; 3) providing facilities of social education to women; 4) extending special facilities to girls and adult women for preparing them to appear in examinations at all levels as private candidates; 5) introducing vocational or occupational bias at all stages of education. The Second Plan stressed special measures to educate parents and to relate education more closely to the needs of girls. The difficulties in introducing co-education should be overcome by opening separate schools and by adopting shift system as an interim measure. The State Plans lack sufficient measures for the education of girls, as seen from the fact that at the secondary stage, of the total population of 12 million girls in the age group 14-17, only 3% are attending schools. Special scholarships have been recommended for girls desirous of taking up positions as nurses, health visitors, teachers. The Third Plan aimed at continuing the programme of covering all children in the age-group 6-11, to be followed by extension of education for the entire age-group 11-14 during the Fourth and Fifth Plans in order to fulfil the Constitutional directives. However, the difficulty of bringing girls to schools in sufficient numbers continues to be the major problem during the Third Plan. The enrolment targets are: 1) primary level - 62% of the population in the age group 6-11 (boys 90.4%), involving an additional enrolment of 8.6 million; 2) middle level - 17% of the population in the age group 11-14 (boys 40%) involving an additional enrolment of 1.28 million. Taking the two age groups together, the Plan postulated an increase from 31% in 1961 to 46% (boys 73%) 3) secondary level - 7% of the population in the age group 14-17 (boys 24%) involving an additional enrolment of .47 million. Of the total 1759 million rupees earmarked for girls' education, Rs.1140 million would be spent for education at the primary and middle school stages. States had been urged to keep in view the recommendations of the National Committee on Women's Education, while drawing up their Plans.

A58 INDIA. SECONDARY EDUCATION COMMISSION (1952): Some special problems of women's education (In its report. Delhi, Manager of Publications (for Ministry of Education), 1965.44 - 6, 48).

The Commission did not devote a separate chapter for women's education, because it felt that any type of education open to men should also be open to women. The role of women vis-a-vis the home has been discussed with reference to the views expressed by the witnesses examined by the Commission. There was general agreement that education for boys and girls should be more closely related to the home and the community. The teaching of home science had been favoured in girls' schools, not because the woman's place is restricted to the home, but in order to enable them to perform their two-fold duties to the family and to society. This would eventually bridge the gulf between the school and the life of the home and the community. As regards co-education, it has been pointed out that if possible, separate schools for girls should be established, as they are likely to offer better opportunities than mixed schools, to develop the physical, social and mental attitude of girls. However, the choice should be left to the parents. In mixed schools, definite rules should be laid down to provide for the specific needs for girls e.g., appointment of women teachers, provision for teaching subjects like home science, home crafts, music, drawing etc., separate sanitary conveniences, retiring room, playing fields, and special co-curricular activities suited to girls.

A59 INDIA. UNIVERSITY EDUCATION COMMISSION (1948-49): Women's education. (In its report. New Delhi, Manager of Publications (for Ministry of Education), 1963. 392-402),

The following topics have been discussed: 1) importance of women's education for national life; 2) special courses for women; 3) future of women's education. The Commission had stressed that though men and women are equally competent in academic work and though many subjects are of common interest, it does not follow that education for both should be identical. The Commission had, therefore, put emphasis on the education of women as women. Preparation of women for home and family needs consideration. Expansion of the following four special courses in universities has been favoured; 1) home economics; 2) nursing at the graduate level; 3) teacher education; and 4) the fine arts, e.g. textile design, craftsmanship. Regarding co-education, the Commission expressed the view that as far as possible co-educational institutions should be encouraged at degree level, since separate institutions at this level would mean an unjustified increase in expense. The recommendations are: 1) provision for ordinary amenities and decencies of life in colleges originally planned for women; 2) expansion of educational opportunities for women; 3) provision for intelligent educational guidance to help women to get a clearer view of their real educational interests; 4) designing college programmes to enable women to function both as citizens and as housewives; 5) removing the prevailing prejudices against the study of home economics and home management; 6) emphasizing courtesy and social responsibility on the part of men in mixed colleges; 7) paying the same salries to men and women teachers.

A60 KAMAT A R: Women's education in rural areas. (In Shreemati Nathibai Damodar Thakersey Women's University. Golden Jubilee Commemoration Volume. Bombay, the University, 1968. 88-92).

The different aspects of women's education in rural areas have been examined on the basis of the data collected during village surveys conducted by the Gokhale Institute of Politics and Economics. Although the illustrations cited are from individual villages in Western Maharashtra, they could be considered typical of the rural areas of Maharashtra. The major findings are: 1) women's education is spreading horizontally from big nuclear villages to small peripheral villages, vertically from higher social caste groups to lower ones, and from high-income groups to low-income groups; 2) women having urban contact were better educated than those without such contact; 3) the number of middle and high schools had considerably increased during the preceding decade; 3) the percentage of girls was 22.7 in middle schools and 1.8 in high schools. Three factors responsible for the low enrolment of girls in secondary schools are: 1) withdrawal of girls from schools after a certain age; 2) lack of separate girls' schools; 3) location of secondary schools far away from rural residences.

A61 KHANDWALA V K, Ed.: Education of women in India, 1850-1967 - a bibliography. Bombay, Shreemati Nathibai Damodar Thackersey Women's University, 1968. 115p. (Golden Jubilee Commemoration Volume, part 4).

The bibliography contains 976 entries grouped under the following headings: 1) general history; 2) levels of studies; 3) special aspects; 4) women and profession; 5) associations and institutions; 6) conferences; 7) biographies; 8) dissertations and theses. [For dissertations and theses on women's education, the publication entitled Educational Investigations in Indian Universities (1939-61), published by the National Council of Educational Research and Training may also be referred to]. For some entries, indicative abstracts have been given. The entries included are books, periodical articles and reports.

A62 MEHTA P H: Felt needs of female students and their implications for education. NIE Journal 1968, 3(1), 13-18.

The paper is based on two studies: 1) survey of the problems of secondary school students (5001 boys, 4058 girls) in urban areas of 11 States, conducted by the National Institute of Education (NIE) during 1963-64; and 2) investigations carried out in 1960-61 by the All India Educational and Vocational Guidance Association, covering 1508 men and 515 women students in undergraduate and postgraduate classes of 17 universities. The findings indicate that there is considerable maladjustment among high school girls and college women in urban areas, and that these groups have the largest number of problems, in adjusting to their educational environment as distinct from the area of curriculum and teaching methods, in which they feel the least number of problems. This points to deficiencies in our educational system from the standpoint of the students' development and adjustment, and to the need for guidance services, for rectifying these deficiencies. The investigations also highlight the necessity of taking into consideration the needs and problems of students in our educational planning.

MISRA L: Education of women in India, 1921-1926. Bombay, Macmillan and Co. Ltd., 1966. viii, 225p. 227 ref.

[see Indian Educational Material v.1, abstract no. 1077].

A63 MISRA L: Women education. (In Uday Shankar, Ahluwalia S P Eds. Development of education in India 1947-1966. Kurukshetra (Haryana), Kurukshetra University (Department of Education), 1967. 107-19).

Presents a brief review of the progress of women's education during the period 1947-65 under the following headings: University Education Commission (1948-49), Constitutional provisions, First Five Year Plan (1951-56), Secondary Education Commission (1952-53), Second Five Year Plan (1956-61), National Committee on Women's education (1958-59), Third Five Year Plan(1961-66) and Education Commission (1964-66). An assessment of the progress made during the three Plans shows that although there has been a phenomenal expansion in girls' education, the disparity in enrolment between boys and girls remains. Even after 15 years of the commencement of the Constitution, the goal of providing free and compulsory education to all children up to 14, remains unfulfilled. This has affected girls' education more; e.g. in the 6-14 age group, only 46.1% girls (as against 73% boys) were estimated to be in schools in 1965-66. Wastage and stagnation also pose a great problem. In 1961-62 44% of the boys admitted to class 1 reached class IV, but the percentage for girls was only 37.5%. Similarly, 66.2% of the girls admitted in class V reached class VII, as against 75.6% boys. The slow progress of girls' education is partly explained by the lack of interest and spirit of dedication of most of the educational administrators and workers.

A64 NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING, NEW DELHI: Girls' education. (In its Indian yearbook of education - first yearbook, a review of education in India (1947-61). Revised edition. New Delhi, the Council, 1965-68. 15, 31-3, 147, 159-60, 172-3, 183-4, 195, 203, 205,214, 219, 228-9, 251-3, 326, 433, 463-4, 486, 496-7, 543-7, 577, 601-2, 611, 632-3, 639, 664, 695, 724, 755-7, 781-3, 812-13, 841, 866, 872-3). 4 ref.

The publication includes a comprehensive review of education including girls' education from 1947 to 1961. Part I deals with the development at the Central sector (including Union territories), and Part II reviews the progress in the States. Necessary statistical data have also been presented.

A65 NATIONAL COUNCIL FOR WOMEN'S EDUCATION, NEW DELHI:
Annual report. Ist- , 1959/60- .

The Council was set up in 1959 by the Ministry of Education to advise the government on issues relating to the education of girls at school level, and of adult women. The sixth annual report (March 1965 - February 1966. 29p.) reviews the progress of enrolment and the proposals for the Fourth Plan. At the end of the Third Plan the percentage of girls at school to the total population in the age-groups at primary, middle and secondary stages would be 56.2, 16.7 and 7.8 respectively. The corresponding figures envisaged at the end of the Fourth Plan are 82.4, 29.1 and 13. This implies that, out of the additional enrolment of 30.76 million, 16.58 million would be girls. Special emphasis in the Fourth Plan would be on opening new girls' schools in rural areas and appointment and training of women teachers. Advance action would mainly relate to the training of women teachers. Resolutions passed at the seventh meeting of the Council include those on polytechnic education for women and school health programmes. Annexures give among others the following: I-III: enrolment statistics including the Fourth Plan targets; IV: Fourth Plan outlay for special schemes for girls' education; VI: Summary of the findings and recommendations of the Fifth National Seminar on compulsory primary education.

A66 NATIONAL COUNCIL FOR WOMEN'S EDUCATION, NEW DELHI:
COMMITTEE ON THE DIFFERENTIATION OF CURRICULA FOR BOYS AND GIRLS: Report. New Delhi, Ministry of Education, 1964. 88p. [Chairman: Mrs Hansa Mehta]

In the democratic and socialistic pattern of society as envisaged in India, education would be related to individual capacities, aptitudes and interests which are not strictly related to sex. There would, therefore, be no need to differentiate the curricula on the basis of sex. In the present transitional phase some psychological differences between men and women as well as certain divisions of social functions based on them would have to be accepted as a practical basis for developing the curriculum, provided that values and aptitudes essential in the long run are increasingly built up in men and women and existing differences are not perpetuated.

A67 NATIONAL COUNCIL FOR WOMEN'S EDUCATION, NEW DELHI COMMITTEE TO LOOK INTO THE CAUSES FOR LACK OF PUBLIC SUPPORT PARTICULARLY IN RURAL AREAS FOR GIRLS EDUCATION AND TO ENLIST PUBLIC COOPERATION (1963): Report. Delhi, Manager of Publications (for Ministry of Education), 1965. 97p. ⁄Chairman: M. Bhaktavatsalm⁄

Chapter 2 presents the historical background of women's education in India. The third chapter reviews the position in six States, (Bihar, Jammu & Kashmir, Madhya Pradesh) where the progress of girls' education has been slow. The fourth chapter examines the need for public cooperation for the promotion of girls' education. The fifth chapter suggests programmes for qualitative improvement. Chapter 6 contains the recommendations. Direct cooperation of the public has been sought in the following matters: (a) establishment of private schools, (b) construction and maintenance of school buildings, (c) suitable residential accommodation for teachers and students in rural areas, (d) popularizing co-education at the primary stage, (e) creating public opinion in favour of the teaching profession, (f) popularizing the teaching profession among women, (g) encouraging married women teachers to take up at least part-time work in village schools and to work as school mothers, (h) removal of traditional prejudices against girls' education, (i) setting up school betterment committees and organizing school improvement conferences, (j) supply of mid-day meals, and (k) supply of free uniforms and instructional material to needy children. State Council for Women's Education should take lead in mobilizing community support for the promotion of girls' education. State governments should create public opinion in favour of girls' education through school improvement conferences, seminars, radio broadcasts, distribution of informative literature, special enrolment, and assisting different organizations associated with girls' education. Some suggestions have been made for increasing the number of women teachers and to provide them certain facilities. A scheme of Central assistance outside the Plan ceilings at the elementary and secondary stages has been suggested to prepare and appoint women teachers, grant free books, writing materials and clothing to girls, construct hostels and quarters for women teachers, and establish separate secondary schools for girls. In addition to this Central assistance, State governments should also explore possibilities of raising local resources. Compulsory Education Act should be introduced in States immediately where it does not exist. As regards the adjustment of school hours and school holidays, it has been stressed that the proper place for children during the day would be the school. Therefore, such adjustment should be a temporary feature for inducing parents to send their children to school. Specific recommendations for the 6 less advanced States have also been made. The appendices include enrolment data.

A68 NATIONAL SEMINAR ON ADULT EDUCATION FOR WOMEN IN THE CHANGING PATTERN OF SOCIETY, NEW DELHI, OCTOBER 1968: Seminar working paper. Indian Journal of Adult Education 1968, 29(10), 6-9.

The draft working paper presents four problems for discussion : 1) level of literacy to be achieved; 2) obstacles in organizing a literacy programme; 3) content of literacy education; and 4) organizational set up for the literacy programme. The level of literacy would depend on the responsibility that would devolve on women due to the changing social conditions. Two-fold literacy level for rural women has, therefore, been envisaged: 1) basic elementary literacy for all women; 2) a higher standard (about VIIIth standard) for those who show leadership potentialities. Urban women would be required to attain a higher level (about Vth standard) than the basic level in the rural areas. The main obstacles identified are: 1) inferior social status of women; 2) dearth of women teachers; 3) dearth of leadership among women; 4) lack of idealism in the country's political leadership. The wastage is due to lack of motivation among women, special social handicaps, lack of schools in some villages, and dearth of women teachers. Remedial measures suggested are: 1) organizing a number of literacy classes in big villages; 2) holding classes on 3 or 4 days a week; and 3) involving students in the administration and organization of the classes and also in community affairs. Majority of the women would be taught house-keeping, principles of health and nutrition, family planning, and economic skills helpful in supplementing the family income. For providing local leadership a few selected women would be acquainted with methods of improving women's condition, organizing women's groups, conducting meetings and discussions, and writing reports and memoranda. As regards the organizational set-up the suggestions are: 1) local women's groups, preferably organized by teachers; 2) cooperative societies to train women for cottage industries; 3) organizations for training teachers and leaders, preparing and distributing instructional material, and improving social conditions of women. In rural areas the official organizations like the Panchayat Samities might have women welfare committees. In urban areas urban Community Development/Social Education Departments, Education Departments and Social Welfare Departments might have special wings for women.

A69 NATIONAL SEMINAR ON COMPULSORY PRIMARY EDUCATION, 5TH, NAINITAL (U.P.), 8-14 MAY 1965: /Promotion of girls' education 7 (In National Council for Women's Education. Sixth annual report (March 1965 - February 1966). New Delhi, Ministry of Education, 1966. 25).

Item No. 2(xi) of the recommendations of the seminar - The following steps should be taken to promote girls' education:

1) appointment of school mothers; 2) award of stipends and scholarships to girls attending schools; 3) provision of residential quarters and hostels for women teachers; 4) organizing continuation classes and condensed courses to meet the shortage of women teachers; 5) granting stipends at higher rates to women trainees from rural areas at teacher training institutions; 6) creating public opinion in favour of co-education at the primary level.Funds earmarked for girls' education should not be diverted for other purposes.

A70 NATIONAL SEMINAR ON ELEMENTARY EDUCATION, 7TH, MAHABALESHWAR, (MAHARASHTRA) 15-20 MAY 1967: Measures to promote enrolment and attendance including action programme for promotion of girls' education. (In its report. New Delhi, Ministry of Education, 1968. 20-5).

The major recommendations are: 1) organizing propaganda at the beginning of the school year to bring more girls into standard I and for their retention till standard VII/VIII; 2) implementation of the special programme in States which includes inventives to girls and women teachers, particularly in rural areas, for increasing the enrolment during the Fourth Plan; 3) setting up at least one hostel in each district for middle school girls; 4) providing hostel facilities in rural areas where only men teachers are working; 6) provision for part-time and continuation education from standard V/VI onwards to girls and women who had completed primary education; 7) setting up balwadis (centres which combine child welfare activities with pre-school education), and creches in primary schools to relieve girls from the responsibility of looking after their younger brothers and sisters; 8) inclusion of girls' education in the social education programme for adult literates; 9) regular broadcasts from All India Radio for the promotion of girls' education; 10) identifying areas having large number of non-attending girls and adoption of special programmes for such areas; 11) relating the curriculum to the needs of girls; 12) implementation of the recommendation of the Education Commission for setting up special machinery to look after the education of girls and women, both at the Centre and in States; 13) starting part-time schools as pilot projects for girls above the age of 8 and in the compulsory age-group, who had not attended any school.

A71 PHADKE S: Special problems of the education of women. (In Gore M S, Desai I P, Chitnis S, Eds. Papers in the sociology of education in India. New Delhi, National Council of Educational Research and Training, 1967. 173-200. 15 ref.)

A review has been made of the changing social position of women from the Vedic period up to the advent of independence, and its effect on the development of institutional arrangements for their education. In spite of the post-independence expansion of women's education, the following problems need attention: 1) the gap between the proportion of men and women at different levels of education. It widens with each higher level of education; 2) disparities in education between regions and socio-economic groups; 3) wastage and stagnation; 4) inadequate educational facilities. This has been attributed to two factors: (a) official failure to recognize women's education as a special problem, and (b) the wrong generalization that Indian women have attained equality with men; 5) lack of proper definition of the objectives of women's education. The forms of interaction between education of women and social institutions, such as the family and marriage, the perception of roles, social attitudes and values, have also been examined.

A72 PHADKE S: Women's education in India - a historical perspective (In Shreemati Nathibai Damodar Thakersey Women's University, Bombay, Golden Jubilee Commemoration Volume, Bombay, the University, 1968. 77-83).

Presents a review of women's education in India from the 18th century to early 20th century. Some highlights of the development are: 1) lack of any organized public school system for girls at the beginning of the 19th century; 2) establishment of girls' schools by the Serampore Missionaries in Bengal, Bihar and U.P. since 1816; 3) establishment of a large number of schools by the wives of foreign missionaries in the first half of the 19th century; 4) participation of non-religious organizations (Female Juvenile Society, 1819, Ladies' Society for Female Education, Calcutta, Ladies Association) in running girls' schools with the help of some liberal Indians like Radhakant Deb, Raja Ram Mohan Roy; 5) establishment of the first public school for girls on secular lines by Bethune in 1849 in Calcutta; 6) publication of Wood's Dispatch in 1854, which inter recommended that all schools for girls, including Zenana teaching, be brought under a comprehensive educational system and assisted through grants-in-aid; 7) in 1882 there were 616 government schools for girls, 1662 government-aided schools, and 429 unaided schools, with a total enrolment 127,066 mostly at primary level; 8) establishment of a large number of schools in the districts of Hooghly, Burdwan, Midnapur and Nadia during 1857-58 with the support of

Ishwar Chandra Vidyasagar (1820-1891), and establishment of schools in Bombay by the Parsis under the leadership of Dadabhai Naoroji, Sorabji Shapurji Bengalee, and others; 9) provision of education for widows made by the Hindu Social Reform Association, Madras, the Brahmo Samaj, the Ramakrishna Mission etc; 10) establishment of teacher training institutions, nursing and medical schools by missionaries towards the end of the 19th century, exclusively for women; 11) establishment of the S.N.D.T. Women's University in 1916 by D.K. Karve.

A73 RAJAN S: Education of girls (In Indian Yearbook of Education, 1964- second yearbook, elementary education. New Delhi, National Council of Educational Research and Training, 1964. 155-72).

Education of girls is the most significant problem in the expansion of primary education. The magnitude of the problem is evident from the fact that during the Fourth and Fifth Plans, 19.4 million girls in the age group 5-11 have to be enrolled (as against 11 million of boys) in order to realize the goal of universal education, and that on the basis of the present rate of growth, only 30% of the girls in the age group 11-14 could be enrolled by 1976. The social and historical factors causing the gap in the education of boys and girls have been described. A review of the statistical data relating to the progress of girls' education reveals three types of unequal development of girls' education: 1) regional inequalities, with six States (Bihar, Jammu & Kashmir, Madhya Pradesh, Rajasthan and Uttar Pradesh) lagging much behind; 2) the large gap in the education of boys and girls in rural areas; 3) wide gap between the upper and middle income groups, and lower income groups. The factors impeding the progress are: 1) traditional prejudices against the education of girls; 2) lack of women teachers; 3) absence of separate schools for girls; 4) household responsibilities of girls; 5) poverty of parents; 6) adverse attitude of men towards women's education; 7) early marriage of girls in rural areas; 8) location of schools far away from home; 9) failure to pay attention to special needs of girls. The programme of action to expand the education of girls includes: 1) concentration on educative propaganda; 2) popularizing co-education, particularly at the primary stage; 3) increasing the number of women teachers; 4) financial inducement to parents; 5) provision of school facilities within accessible distance from the home of every child; 6) paying attendance allowance to the teacher on the basis of total enrolment in the school. The special responsibility of the Centre for the promotion of girls' education, as highlighted in the recommendation of the National Committee on Women's Education, has been stressed.

A74 SENGUPTA P: Women's education in India, New Delhi, Ministry of Education, 1960. 30p.

The publication makes a brief review of the pattern of women's education in India. The first chapter traces the history and nature of women's education. The second chapter provides information on the following aspects of women's education: 1) nursery, primary, and secondary education; 2) basic education; 3) university education; 4) social education; 5) multipurpose and junior technical schools; 6) syllabi for girls in schools and universities; 7) literacy classes and community centres; 8) home science as a special subject in the curriculum; 9) co-education; 10) women teachers; 11) research and technological studies; and 12) physical education. The third chapter discusses the future of women's education in India.

A75 SHAH M R: Sex difference in academic achievement. (In Shreemati Nathibai Damodar Thackersey Women's University, Bombay. Golden Jubilee Commeration Volume. Bombay, the University, 1968. 192-7. 7 ref).

The object of the study was to determine whether differences exist between sexes in their achievement in different subjects at different grade levels. Achievement tests constructed by the Gujarat Research Society for standards V-VII and by the M.S. University Baroda for standard VIII-X were administered to a sample of 3890 boys and 3648 girls reading in secondary schools in urban areas of Suburban Bombay. The medium of instruction of the sample was Gujarati. The sample was divided into five IQ groups: 75-94, 95-104, 105-114, 115-124, 125- . Subjects covered were Hindi, Gujarati, science, arithmetic, history and geography. The scores were analyzed to determine the existence differences between the two sexes for each standard for the total group and then to find whether differences also existed within the different IQ groups in achievement in each of the subjects studied. The IQ - and grade-wise analysis of results did not reveal any significant difference between the two sexes. The results are contradictory to the findings of most of the previous studies.

A76 SHARIQUE A S: Sir Syed's views about education of women. Muslim University Gazette 1968, 18(1), 3-4.

Though Sir Syed Ahmed Khan (1870-1898) [see also *Indian Educational Material* v.1, abstract no. 985] was not against women's education, he had certain reservations regarding the kind of edudation to be given to Muslim women and the methods to be adopted. His notion about the education of Muslim girls, largely based on the system prevalent in the families of the Muslim nobility in medieval India, was outlined in his article published in the *Aligarh Institute Gazette* in 1869. He advocated five-year schooling starting at 7 years of age and inclusion in the curriculum of subjects like theology, domestic affairs, and certain crafts which would help women in their duties as mothers and housewives. Teaching of natural science, mathematics, history, and geography was vehemently opposed. He recommended that schools should be located in the houses of some responsible persons, under the supervision of ladies. He firmly opposed government's interference in women's education, but desired some lady inspectors to make periodical inspection of girls' schools.

A77 SNDT Women's University- retrospect and prospect: (*In* Shreemati Nathibai Damodar Thackersey Women's University, Bombay. Golden Jubilee Commemoration Volume. Bombay, the University, 1968. 173-88. appendices p. 12-32).

The S.N.D.T. Women's University (started as Indian Women's University on the model of Japan Women's University), the only of its kind in India, was formally inaugurated on June 3, 1916 with Dr. R.P. Paranjpye as the first Vice-Chancellor. Set up primarily through the efforts of . Dr. D K Karve, the well-known educationist and social worker with the financial support of Sir Vithaldas Thackers it had the blessings of Tagore and Gandhi. Its special features are: 1) use of both mother tongue (Marathi, Gujarati and Hindi) and English as media of instruction and examination, and study of English as a compulsory subject in all examinations; 2) allowing girls to appear as private candidates in all examinations; 3) relating the syllabus to the needs of women, with the inclusion of subjects like home science and fine arts; 4) extension of the jurisdiction of the university all over India. The appendices include data on enrolment, expenditure, teachers, academic and general programmes, and the chronology of events since its inception.